

United States District Court
Northern District of California

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

FEDERAL TRADE COMMISSION,
Plaintiff,
v.
META PLATFORMS INC., et al.,
Defendants.

Case No. [5:22-cv-04325-EJD](#)

**ORDER DENYING PLAINTIFF'S
MOTION FOR PRELIMINARY
INJUNCTION**

Re: ECF Nos. 108, 164, 470

This action was brought by Plaintiff Federal Trade Commission (“FTC”) to block the merger between a virtual reality (“VR”) device provider and a VR software developer. Defendant Meta Platforms Inc. (“Meta”) has agreed to acquire all shares of Within Unlimited, Inc. (“Within,” collectively with Meta, “Defendants”). The FTC has come before the Court to seek preliminary injunctive relief pursuant to Section 13(b) of the Federal Trade Commission Act, 15 U.S.C. § 53(b), to enjoin Defendants from consummating their proposed merger (the “Acquisition”) pending the outcome of ongoing administrative proceedings before the FTC. ECF Nos. 101, 164.

In addition to the FTC’s motion for preliminary injunction, Defendants have filed a motion to dismiss the Amended Complaint (“FAC”) and a motion to strike the opinion of the FTC’s expert, Dr. Hal J. Singer, regarding the relevant product market definition. ECF Nos. 108, 470.

Over the course of a seven-day evidentiary hearing, the Court heard the parties’ arguments and evidence. The Court has also received briefing on all pending motions, as well as pre-hearing and post-hearing submissions of the parties’ proposed findings of fact. Having considered the parties’ submissions and evidence, the Court DENIES Defendants’ motion to dismiss, DENIES

1 the Defendants’ motion to strike, and DENIES the FTC’s motion for preliminary injunction.

2 **I. FACTUAL FINDINGS**

3 **A. Defendant Meta Platforms, Inc.**

4 1. Defendant Meta Platforms, Inc. is a publicly traded corporation organized
5 under Delaware law and headquartered in Menlo Park, California. DX1237, at 11. Meta operates
6 a collection of social networking platforms referred to as its “Family of Apps,” which includes
7 Facebook, Instagram, Messenger, and WhatsApp. PX0937, at 51. Meta also manufactures VR
8 devices, such as the Quest 2 and the Quest Pro headsets, through its Reality Labs division.
9 Stojavljevic Hr’g Tr. 71:2–13; 74:10–19.

10 2. VR technology enables users to experience and interact with a digitally
11 generated three-dimensional environment by wearing a headset with stereoscopic displays in front
12 of each eye. Stojavljevic Hr’g Tr. 72:25–74:9. Users can download a wide variety of VR
13 software applications (“apps”) from digital marketplaces, or app stores, for use on their personal
14 VR devices. Pruett Hr’g Tr. 219:19–25. Quest headsets are designed so that a user’s geolocation
15 determines what content is available and at what price. Stojavljevic Hr’g Tr. 79:23–80:6.

16 3. In 2020, 2021, and 2022, Meta spent several billion dollars each year on its
17 VR Reality Labs division. Zuckerberg Hr’g Tr. 1280:9–1282:15.

18 4. Meta operates an app store called the Quest Store, previously known as the
19 Oculus Store. Third-party app developers can request to have their app distributed in the Quest
20 Store, and Meta also actively seeks out and invites developers to bring apps to the Quest Store.
21 Stojavljevic Hr’g Tr. 79:16–22; Pruett Hr’g Tr. 220:8–13. Apps must meet several content,
22 technical, and asset requirements before they may be considered for listing on the Quest Store;
23 however, Meta may still reject an app that meets all the requirements pursuant to the Quest Store’s
24 curation policy. Pruett Hr’g Tr. 220:25–223:16. Apart from the Quest Store, Meta also operates
25 App Lab, an app distribution service for VR applications that meet basic technical and content
26 requirements but is otherwise free from any editorial curating by Meta. Pruett Hr’g Tr. 260:16–
27 22. Quest users can also download VR apps from other app stores on VR platforms that Meta

1 does not own, such as SideQuest and Steam VR Store. Pruettt Hr’g Tr. 274:8–21.

2 5. The content and apps that are available for a particular VR system plays an
3 important role in the widespread adoption of that system, and many users may purchase a VR
4 system for specific content they want to experience. Zuckerberg Hr’g Tr. 1294:16–125:2;
5 Stojavljevic Hr’g Tr. 101:6–13, 101:21–27. As a result, high quality and popular VR apps—
6 dubbed as “system sellers”—can drive adoption and sales of the specific headsets for which they
7 are available. Stojavljevic Hr’g Tr. 107:23–108:5. Broad adoption of a specific VR system, in
8 turn, will attract third-party app developers to create more VR content for that system, a
9 phenomenon referred to as a “flywheel” effect. PX0100, at 2–3; Bosworth Hr’g Tr. 1048:21–
10 1049:3.

11 6. When a VR app is developed wholly by a developer unaffiliated with Meta,
12 Meta refers to that as third-party (“3P”) development. When Meta funds all or most of a VR app’s
13 development, Meta refers to that as second-party (“2P”) development. When a VR app is
14 developed in-house at Meta, either by acquired VR studios or Meta employees themselves, Meta
15 refers to that as first-party (“1P”) development. Stojavljevic Hr’g Tr. 72:12–16; 106:16–21.

16 7. Meta encourages third-party VR app developers to build apps for the Quest
17 platform by providing funding and technical VR engineering assistance to those developers.
18 Stojavljevic Hr’g Tr. 106:5–15. Specifically, Meta provides grants that are designed to improve
19 existing VR software or incentivize the development of software on Quest that may only exist on
20 another platform. Meta also maintains a developer relations engineering team consisting of
21 veteran engineers who work directly with developers to improve software quality, fix bugs, or
22 polish the experience they are building. Pruettt Hr’g Tr. 285:19–286:12. Meta’s VR content
23 organization spends approximately [REDACTED]. PX0066 (“Rubin Dep.”) 24:5–25:8.

24 8. In addition to providing funding or engineering support to third-party VR
25 app developers, Meta has also sought to increase the VR app content available on its platform by
26 acquiring third-party app developers and developing its own apps internally. PX0055 (“Verdu
27 Dep.”) 117:5–118:12.

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1 9. Although decisions may be made on a case-by-case basis, Meta typically
 2 will seek to acquire or build its own VR app if: [REDACTED]
 3 [REDACTED]
 4 [REDACTED]
 5 [REDACTED]
 6 [REDACTED]
 7 [REDACTED]
 8 [REDACTED] PX0127, at 4–5.

9 10. Similarly, Meta is more inclined to build its own VR app instead of
 10 acquiring an existing third-party developer [REDACTED]
 11 [REDACTED]
 12 [REDACTED]
 13 [REDACTED] PX0127, at 5.

14 11. In the past three years, Meta has acquired at least nine VR app studios: Beat
 15 Games, Sanzaru Games, Ready at Dawn Studios, Downpour Interactive, BigBox VR, Unit 2
 16 Games, Twisted Pixel, Armature Studio, and Camouflaj. Stojsavljevic Hr’g Tr. 87:5–88:2.

17 12. The VR apps that Meta has independently developed and released include
 18 Horizon Worlds (world building), Horizon Workrooms (productivity), Horizon Venues (live
 19 events), and Horizon Home (social networking). Meta’s Answer and Affirmative Defenses ¶ 35,
 20 ECF No. 84. Meta’s background and emphasis has been on communication and social VR apps.
 21 Zuckerberg Hr’g Tr. 1273:15–1274:22. That said, Meta has also developed and released Dead and
 22 Buried, a multiplayer shooter game. Bosworth Hr’g Tr. 1051:18–20.

23 **B. Defendant Within Unlimited, Inc.**

24 13. Defendant Within Unlimited, Inc. is a privately held corporation organized
 25 under the laws of Delaware with headquarters in Los Angeles, California. PX0006, at 1, 161.
 26 Within is a software development company founded by Chris Milk and Aaron Koblin, who were
 27 experienced visual artists. Milk Hr’g Tr. 669:25–670:6; Koblin Hr’g Tr. 649:9–13.

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1 14. Within’s flagship product is Supernatural, a subscription VR fitness service
2 launched in April 2020 on the Quest Store. PX0005, at 77. Supernatural releases new workouts
3 daily and continues to add new modalities (*e.g.*, aerobic boxing, meditation) to its lineup of
4 workouts. Koblin Hr’g Tr. 605:15–606:4; Milk Hr’g Tr. 734:1–11. Users access Supernatural’s
5 workouts by paying a monthly subscription fee of \$18.99 or an annual subscription fee of \$179.99.
6 FAC ¶ 24, ECF No. 101-1; Within’s Answer and Affirmative Defense ¶ 25, ECF No. 83.

7 [REDACTED]

8 [REDACTED] Koblin Hr’g Tr. 636:15–22; Milk Hr’g Tr. 735:17–21. Within has never
9 changed Supernatural’s prices. Carlton Report ¶ 77. At present, [REDACTED]
10 Milk Hr’g Tr. 735:20–21.

11 **C. The Alleged “VR Dedicated Fitness App” Market**

12 15. The FTC alleges that the relevant market consists of VR dedicated fitness
13 apps in the United States. Mot. 13, ECF No. 164. The government defines “VR dedicated fitness
14 apps” as VR apps that are “designed so users can exercise through a structured physical workout
15 in a virtual setting anywhere they choose to use their highly portable VR headset.” *Id.*

16 16. Both Meta and Within have repeatedly referred to VR apps intended to
17 provide immersive at-home structured physical exercise as “deliberate” or “dedicated” fitness
18 apps. *E.g.*, Rabkin Hr’g Tr. 831:12-24; PX0001, at 5; PX0286, at 1; Milk Hr’g Tr. 681:19-21;
19 PX487, at 4; Pruettt Hr’g Tr. 263:6–264:2; PX0004, at 169. Meta now describes these apps as
20 “trainer workout apps.” PX0060 (“Paynter Dep.”) 24:2–12, 56:14–23. VR dedicated fitness apps
21 are sometimes called “VR deliberate fitness apps” or “trainer workout apps.” The Court will use
22 the phrase “VR dedicated fitness apps” throughout.

23 17. VR dedicated fitness apps are marketed to customers for the purpose of
24 exercise. Pruettt Hr’g Tr. 263:6–18. Some other VR apps, often called “incidental” or
25 “accidental” fitness apps, may include mechanics that may allow users to exercise as a byproduct
26 but have a primary focus other than fitness (such as gaming). PX0001, at 5 n.10; PX0529, at 2;
27 Carmack Hr’g Tr. 562:12–18. Unlike VR incidental fitness apps, VR dedicated fitness apps often

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1 have features like trackable progress goals, heart rate tracking, and motion calibration. PX0001, at
2 5 n.10; Milk Hr’g Tr. 683:8–21. Additionally, VR dedicated fitness apps generally require the
3 producing company to have expertise and assets that allow them to create exercise content, *e.g.*,
4 workout coaches, green screen studios, stereoscopic capture, post processing pipelines. PX0111;
5 PX0251, at 2–3; PX0127, at 7; Koblin Hr’g Tr. 650:3–12; Garcia Hr’g Tr. 1079:16–24. And
6 because VR dedicated fitness apps create content on an ongoing basis to avoid user boredom, they
7 are better suited than most other VR apps to be priced using a subscription model (although not all
8 VR dedicated fitness apps follow this model). Pruettt Hr’g Tr. 269:9–270:17; Singer Hr’g Tr.
9 359:2–18; Vickey Report ¶ 47.

10 18. The user base for VR dedicated fitness apps differs from that of VR overall.
11 VR users generally skew younger and male, but VR dedicated fitness app users tend to have an
12 older and more female set of users. PX0003, at 17; PX0004, at 167; Rubin Dep. 131:19–132:14;
13 PX0127, at 1, 6; Bosworth Hr’g Tr. 1035:18–22. In addition to the diverse appeal of VR
14 dedicated fitness apps, they have strong user retention and rapid growth. Carlton Report ¶¶ 33–35;
15 PX0386, at 12. [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]. PX0003, at 9, 44. [REDACTED]
19 [REDACTED]
20 [REDACTED] PX0386, at 12. [REDACTED]
21 [REDACTED] Carlton Report ¶ 67, Table
22 10.

23 19. Multiple companies that make VR dedicated fitness apps consider their
24 products to compete with the extensive range of methods by which an individual can seek to
25 exercise. According to Within, Supernatural “compete[s] with every product or service or offering
26 that offers fitness or wellness,” ranging from connected fitness devices like Peloton equipment to
27 gyms to YouTube videos intended to be mimicked by a viewer. Milk Hr’g Tr. 724:15–25. Within

1 does not, however, consider a VR incidental fitness app to constitute a fitness offering. Koblin
2 Hr’g Tr. 606:5–8. The founder of VirZoom, another VR company with a dedicated fitness app
3 (VZfit), made similar claims, and added that VZfit even “compete[s] with somebody who wants to
4 just jump on their bike and go for a bike ride.” Janszen Hr’g Tr. 1143:8–12; DX1290 (“Janszen
5 Decl.”) ¶ 23. However, Odders Lab, another VR company that makes not only a dedicated fitness
6 app but also a rhythm game app and a chess app, stated that its fitness app competed most directly
7 with other fitness dedicated apps, such as Supernatural and FitXR, and that the launch of its fitness
8 app had not diminished sales of its rhythm game app. Garcia Hr’g Tr. 1105:18–1106:21.

9 20. [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED] Apple provides Fitness+, a paid subscription app, and [REDACTED]
15 [REDACTED] but it does not currently offer its own headset.
16 DX1257, at 3, 24–28; Bosworth Hr’g Tr. 1022:13–16.

17 21. The customers for more established fitness offerings are perceived to be
18 more likely to have long-term or well-developed fitness routines, while VR dedicated fitness app
19 users are targeted more toward “[REDACTED]” who have less fitness experience. PX0051
20 (“Cibula Dep.”) 84:20–25; PX0318, at 1; PX0563, at 1; DX1081, at 1–2. No record evidence
21 suggests that these firms possess VR engineering expertise. PX0118, at 1; Singer Report ¶ 82. As
22 such, these fitness offerings do not create the 360-degree embodiment in a virtual environment
23 provided by VR dedicated fitness apps. *See, e.g.*, Zuckerberg Hr’g Tr. 1298:5–6; Rabkin Hr’g Tr.
24 835:24–836:3. Although some fitness offerings may display videos of various locations around
25 the world, those videos are displayed on a flat screen. Vickey Hr’g Tr. 1184:12–21.

26 22. Connected fitness devices are generally stationary and larger than the
27 portable and relatively small VR headset equipment required to use a VR dedicated fitness app.

1 *See, e.g.*, Milk Hr’g Tr. 689:17–25. The upfront device cost can be over \$1,000, and users pay a
 2 monthly subscription fee to access fitness content; for example, Peloton and Tonal are connected
 3 fitness device companies, and cost, respectively \$1,445 plus \$44 per month and \$3,495 plus \$49
 4 per month. Singer Report ¶¶ 68–69. There are also more affordable alternatives outside of VR,
 5 such as a Peloton mobile app-only subscription, which costs \$12.99 per month. *Id.* ¶ 65; DX1081,
 6 at 1–2. The subscription model is common in the overall fitness industry—in addition to the
 7 examples above, traditional gyms and Fitness+ charge monthly subscriptions. PX0001, at 2;
 8 DX1081, at 1–2; DX1257, at 3, 24–28.

9 23. Within’s VR app Supernatural is a dedicated fitness app: it was designed
 10 specifically for fitness and offers “daily personalized full-body workouts and expert coaching from
 11 real-world trainers.” PX0906, at 1. Within began developing Supernatural in February 2019, and
 12 launched it in the Quest Store on April 23, 2020. PX0005, at 77; PX0906, at 1. Supernatural now
 13 offers over 800 fully immersive video workouts set to music in various photorealistic landscapes,
 14 such as the Galapagos Islands and the Great Wall of China. FAC ¶ 24, ECF No. 101-1; Koblin
 15 Hr’g Tr. 604:18–605:19; ECF No. 83 ¶ 25; PX0906, at 1; *see id.* at 3–4, 6, 8. Through deals with
 16 major music studios, Supernatural sets each workout to songs from A-list artists like Katy Perry,
 17 Imagine Dragons, Lady Gaga, and Coldplay. FAC ¶ 24, ECF No. 101-1. Within optimized the
 18 exercise movements in Supernatural through consultations with experts holding PhDs in
 19 kinesiology and biomechanics; the workouts are led by personal trainers, calibrated to users’ range
 20 of motion, mapped out in VR by dance choreographers, and filmed at Within’s studio in Los
 21 Angeles. PX0712, at 18–20, 27–29. Within’s founders are experienced directors of interactive
 22 music videos. *Id.* at 3–4. ██████████ Supernatural is
 23 only available to Quest headset users in the United States and Canada. Milk Hr’g Tr. 671:4–9.

24 24. Other VR dedicated fitness apps include FitXR, Les Mills Bodycombat,
 25 VZfit, VZfit Premium, PowerBeats VR, RealFit, Holofit, Liteboxer, Liteboxer Premium VR, and
 26 VRWorkout. Singer Report ¶ 39. Like Supernatural, Liteboxer Premium VR costs \$18.99 per
 27 month. *Id.* Les Mills Bodycombat, PowerBeatsVR, and RealFit have respective one-time costs of

1 \$29.99, \$22.99, and \$19.99; Liteboxer and VRWorkout are free; and the other VR dedicated
2 fitness apps charge monthly subscription prices ranging from about \$9 to \$12. *Id.* Companies
3 producing VR dedicated fitness apps generally pursue business strategies optimized for growth
4 and market penetration, [REDACTED]. Milk Hr’g Tr. 736:15–21; Garcia
5 Hr’g Tr. 1111:8–1112:14; Janszen Hr’g Tr. 1147:22–1148:1. These companies expect that high
6 growth and penetration metrics will render them attractive acquisition targets. *Id.*; Zyda Hr’g Tr.
7 1227:18–22, 1228:15–18.

8 25. All of these apps, including Supernatural, were launched within the past
9 five years. Carlton Report ¶ 125. New VR dedicated fitness apps are expected to launch in the
10 near future. *Id.* Supernatural currently possesses an 82.4% share of market revenue among the
11 existing VR dedicated fitness apps (or a 77.6% share of VR apps in the Quest Store’s “Fitness and
12 Wellness” category). Singer Report ¶ 75, Tables 2-A, 2-B. [REDACTED]

13 [REDACTED] Singer Rebuttal
14 Report ¶¶ 124–25, Tables 1-A, 1-B.

15 26. The FTC’s economics expert, Dr. Singer, analyzed the concentration of the
16 VR dedicated fitness app market using the Herfindahl-Hirschman Index (“HHI”). Singer Report ¶
17 76. Dr. Singer performed the HHI calculation multiple times to account for different conceptions
18 of the firms contained within the VR dedicated fitness app market. *Id.* Using a set of firms based
19 off a list of Supernatural competitors provided by Meta to the FTC, Dr. Singer calculated an HHI
20 of 6,917 by measuring each firm’s market share of revenue. *Id.* ¶¶ 46, 76, Table 2-A. Then, to
21 capture broader potential set of firms within the VR dedicated fitness app market, Dr. Singer
22 analyzed all apps listed in Meta’s Quest Store under its “Fitness & Wellness” category and
23 calculated an HHI of 6,148 (again, based on revenue). *Id.* ¶¶ 48, 76, Table 2-A. Dr. Singer also
24 calculated HHI using market share of total hours spent and identified outputs 6,307 for the set of
25 firms based off Meta’s list and 4,863 for the broader set of “Fitness & Wellness firms.” Singer
26 Rebuttal Report ¶¶ 124–25, Table 1-A. Lastly, Dr. Singer calculated HHI using market share of
27 monthly active users and identified outputs of 3,377 and 2,098 for the two respective sets of firms.

1 *Id.* ¶¶ 124–25, Table 1-B. Markets are generally considered “highly concentrated” when the HHI
 2 is above 2,500 and “moderately concentrated” when the HHI is between 1,500 and 2,500. Singer
 3 Report ¶ 76 & n.129.

4 **D. The Challenged Acquisition**

5 27. Meta and Zuckerberg first expressed interest in acquiring Within as early as
 6 February 22, 2021. PX0170, at 1–2.

7 28. After Zuckerberg showed some interest in [REDACTED]
 8 [REDACTED], Michael Verdu (Vice President of VR Content) investigated and
 9 [REDACTED]. PX0118, at 2, Mar. 4, 2022; Verdu Dep.
 10 7:22–8:02.

11 29. On March 11, 2021, Meta employees met to discuss potential VR fitness
 12 investments with Mark Rabkin, the head of VR technology at Meta and one of the final decision
 13 makers to approve any VR investment. PX0179, at 2; Rabkin Hr’g Tr. 800:7–11; Stojsavljevic
 14 Hr’g Tr. 189:24–190:12. In advance of this meeting, Ananda Dass (Meta’s director of non-
 15 gaming VR content) and Jane Chiao (business-side employee) prepared a pre-read document
 16 analyzing five potential investment options. PX0127, Mar. 10, 2021; Stojsavljevic Hr’g Tr.
 17 69:18–24, 138:11–18, 140:23–141:1, 149:16–151:12. Shortly before this meeting, on March 4,
 18 2021, Jane Chiao had also prepared a document titled, [REDACTED]

19 [REDACTED]
 20 [REDACTED]. PX0492, at 7, Mar. 9, 2021. During the meeting, the
 21 attendees decided [REDACTED]
 22 [REDACTED]. PX0179.

23 30. On March 17, 2021, Dass and Chiao summarized the advantages and
 24 disadvantages of acquiring Supernatural [REDACTED]. At this time, they proposed spending the next
 25 few months inquiring into [REDACTED]
 26 [REDACTED]
 27 [REDACTED]. PX0284, Mar. 17, 2021.

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1 31. On April 20, 2021, Melissa Brown (Head of Developer Relations) prepared
2 an executive summary pre-read in advance of Meta’s meeting with Within, which was circulated
3 to Verdu and Dass. The executive summary contains [REDACTED]
4 [REDACTED]
5 [REDACTED] PX0565, Apr. 20, 2021.

6 32. On April 26, 2021, Brown circulated a [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED] PX0253, Apr. 26, 2021.

10 33. On May 26, 2021, Anand Dass [REDACTED]
11 [REDACTED] DX1012, at 1, 3, May 26, 2021. [REDACTED]
12 [REDACTED] *Id.*; see also PX0123, at 2. [REDACTED]
13 [REDACTED]
14 [REDACTED] PX0117, June 10, 2021.

15 34. Frank Casanova (Apple’s senior director of augmented reality product
16 marketing) testified that Apple [REDACTED]
17 [REDACTED].
18 Casanova’s personal recollection was that [REDACTED]
19 [REDACTED]. DX1219 (“Casanova Dep.”) 90:20–93:15.

20 35. In mid-July 2021, Meta and Within entered into a non-binding term sheet
21 regarding a potential acquisition. PX0062 (“Milk Dep.”) 129:2–14; Milk Hr’g Tr. 720:12–15.
22 Meta and Within executed the Merger Agreement on October 22, 2021. DX1072, Oct. 22, 2021.

E. Beat Saber Expansion Proposal

24 36. Beat Saber is a VR rhythm game in which players use virtual swords to
25 slash oncoming blocks timed to music. FAC ¶ 30; Meta’s Answer and Affirmative Defenses ¶ 33.
26 Beat Saber is the most popular and best-selling VR app of all time. Stojavljevic Hr’g Tr. 82:23–
27 83:8; Rabkin Hr’g Tr. 820:9–11.

1 37. Meta acquired Beat Games, the studio that produces Beat Saber, in late
2 2019. Meta’s Answer and Affirmative Defenses ¶ 4.

3 38. At the time it acquired Beat Games, Meta viewed Beat Saber as a potential
4 “vector into fitness as a game-adjacent use case.” PX0342, at 2, Sept. 27, 2019. There was a
5 continuing internal dialogue at Meta regarding a potential fitness version of Beat Saber, which was
6 referred to as the “perpetual white whale quest to get . . . Beat Games to build a fitness version of
7 Beat Saber.” Verdu Dep. 112:04–112:12, 178:12–20. The founders of Beat Games were “warm
8 to the idea” and released a “FitBeat” song for Beat Saber, but the idea otherwise did not gain
9 traction. Verdu Dep. 178:12–20; see also PX0123 [REDACTED]
10 [REDACTED] Sept. 15, 2021.

11 39. On February 16, 2021, Rade Stojsavljevic (director of Meta’s first party
12 studios) was riding his Peloton bike on a workout with a live DJ spinning music when he came up
13 with the idea of a Peloton partnership with Beat Saber. Stojsavljevic Hr’g Tr. 127:20–128:24.

14 40. Shortly thereafter, Stojsavljevic collaborated on a presentation called
15 “Operation Twinkie,” in which he proposed repositioning Beat Saber as a fitness app in a
16 partnership with Peloton. The same presentation recommended [REDACTED]
17 [REDACTED] PX0527, at 5, 8.

18 41. On March 4, 2021, Chiao responded to comments regarding partnering with
19 Peloton to create VR content, [REDACTED]
20 [REDACTED] PX0251, at 2–3, Mar. 4, 2021.

21 42. On March 11, 2021, Stojsavljevic attended the VR fitness investment
22 meeting with Mark Rabkin. PX0179, at 2; *see also supra* ¶ 31. Alongside the acquisitions of
23 [REDACTED] Supernatural, the March 11 meeting concluded that Stojsavljevic was to prepare a
24 presentation to Rabkin to expand Beat Saber to dedicated fitness. PX0179, at 2.

25 43. On March 15, 2021, Stojsavljevic queried a group chat and solicited
26 feedback on his proposal for a Beat Saber–Peloton partnership. PX0407, at 1, Mar. 15, 2021. The
27 group members discussed different forms the partnership could take. *Id.*

1 subsequently remarked that [REDACTED]

2 [REDACTED] *Id.*

3 **II. PROCEDURAL HISTORY**

4 Defendants signed an Agreement and Plan of Merger for a proposed acquisition of Within
5 by Meta (the “Acquisition”) on October 22, 2021. ECF No. 101-1 (“FAC”) ¶ 24; PX0004, at 161.
6 On July 27, 2022, the FTC filed a complaint for a temporary restraining order and preliminary
7 injunction enjoining the Acquisition. *See* Compl., ECF No. 1. At the time of the FTC’s filing,
8 Defendants would have been free to consummate the Acquisition after July 31, 2022. *Id.* ¶ 27.
9 On July 29, 2022, the Court granted the parties’ stipulated order preventing Defendants from
10 consummating the Acquisition until after August 6, 2022. ECF No. 19. On August 5, 2022, the
11 Court granted the parties’ second stipulated order and entered a temporary restraining order
12 enjoining the Acquisition until after December 31, 2022. ECF No. 56. The FTC filed its amended
13 complaint on October 7, 2022, *see* FAC, and Defendants moved to dismiss the amended complaint
14 on October 13, 2022, ECF No. 108 (“MTD”). The Court took the MTD under submission without
15 oral argument on December 2, 2022. ECF No. 388.

16 On October 31, 2022, pursuant to the parties’ stipulated order, the FTC filed its
17 memorandum in support of its motion for a preliminary injunction (the “Motion”). ECF Nos. 86,
18 164. The evidentiary hearing on the Motion began on December 8, 2022. *See* ECF No. 441.
19 Following the in-Court testimony of the FTC’s economics expert, Dr. Hal J. Singer, on December
20 13, 2022, Defendants orally moved the Court to strike Dr. Singer’s testimony. *See* ECF No. 464.
21 Defendants subsequently filed a motion to strike Dr. Singer’s opinion regarding the definition of
22 the relevant product market. ECF No. 470. The evidentiary hearing concluded on December 20,
23 2022, *see* ECF No. 492, and the Court granted the parties’ stipulated order extending the
24 temporary restraining order to enjoin the Acquisition until January 31, 2023, ECF No. 508.

25 On January 31, 2023, the FTC filed an emergency motion requesting an extension of the
26 temporary restraining order if the Court either was not prepared to rule on the Motion until after
27 that date or denied the Motion. ECF No. 543 (“Emergency Motion”). The Court’s ruling on the

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1 Emergency Motion will be filed in a separate order.

2 The Court now rules on the Motion, the MTD, and the motion to strike Dr. Singer's
3 opinion on the relevant product market definition. *See* ECF Nos. 108, 164, 470.

4 **III. LEGAL CONCLUSIONS**

5 **A. Legal Standard**

6 Section 13(b) of the FTC Act provides that “[u]pon a proper showing that, weighing the
7 equities and considering the Commission’s likelihood of ultimate success, such action would be in
8 the public interest, and after notice to the defendant, a temporary restraining order or a preliminary
9 injunction may be granted without bond.” 15 U.S.C. § 53(b)(2). In evaluating a motion for
10 preliminary injunction brought under Section 13(b), courts must “1) determine the likelihood that
11 the Commission will ultimately succeed on the merits and 2) balance the equities.” *F.T.C. v.*
12 *Warner Commc’ns Inc.*, 742 F.2d 1156, 1160 (9th Cir. 1984) (emphasis added) (citing *F.T.C. v.*
13 *Simeon Mgmt. Corp.*, 532 F.2d 708, 713–14 (9th Cir. 1976)).

14 The federal court is not tasked with “mak[ing] a final determination on whether the
15 proposed merger violates Section 7, but rather [with making] only a preliminary assessment of the
16 merger’s impact on competition.” *Warner Commc’ns Inc.*, 742 F.2d at 1162. To obtain a
17 preliminary injunction, the FTC must “raise questions going to the merits so serious, substantial,
18 difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation
19 and determination by the FTC in the first instance and ultimately by the Court of Appeals.” *Id.*
20 (citations omitted); *see also* *FTC v. Whole Foods Market, Inc.*, 548 F.3d 1028, 1035 (D.C. Cir.
21 2008) (“the FTC [must] ‘raise questions going to the merits so serious, substantial, difficult[,] and
22 doubtful as to make them fair ground for thorough investigation.’”). Although a district court may
23 not “require the FTC to prove the merits, . . . it must ‘exercise independent judgment’ about the
24 questions § 53(b) commits to it.” *Whole Foods Market, Inc.*, 548 F.3d at 1035 (citations omitted).
25 The FTC is therefore required to provide more than mere questions or speculations supporting its
26 likelihood of success on the merits, and the district court must decide the motion based on “all the
27 evidence before it, from the defendants as well as from the FTC.” *Id.* (citations omitted); *see*

1 *United States v. Siemens Corp.*, 621 F.2d 499, 506 (2d Cir. 1980) (noting that “the Government
2 must do far more than merely raise sufficiently serious questions with respect to the merits” in
3 demonstrating a “reasonable probability” of a Section 7 violation.).

4 **B. Relevant Market Definition**

5 The first step in analyzing a merger challenge under Section 7 of the Clayton Act is to
6 determine the relevant market. *U.S. v. Marine Bancorporation, Inc.*, 418 U.S. 602, 619 (1974)
7 (citing *E.I. Du Pont*, 353 U.S. 586, 593 (1957)); see *FTC v. Qualcomm Inc.*, 969 F.3d 974, 992
8 (9th Cir. 2020) (“A threshold step in any antitrust case is to accurately define the relevant market,
9 which refers to ‘the area of effective competition.’”). The relevant market for antitrust purposes is
10 determined by (1) the relevant product market and (2) the relevant geographic market. *Brown*
11 *Shoe Co. v. U.S.*, 370 U.S. 294, 324 (1962).

12 **1. Product Market**

13 “The outer boundaries of a product market are determined by the reasonable
14 interchangeability of use or the cross-elasticity of demand between the product itself and
15 substitutes for it.” *Brown Shoe*, 370 U.S. at 325. “Within a general product market, ‘well-defined
16 submarkets may exist which, in themselves, constitute product markets for antitrust purposes.’”
17 *Hicks v. PGA Tour, Inc.*, 897 F.3d 1109, 1121 (9th Cir. 2018) (quoting *Brown Shoe*, 370 U.S. at
18 325); see also *Newcal Indus., Inc. v. Ikon Office Sol’n*, 513 F.3d 1038, 1045 (9th Cir. 2008)
19 (“[A]lthough the general market must include all economic substitutes, it is legally permissible to
20 premise antitrust allegations on a submarket.”). The definition of the relevant market is “basically
21 a fact question dependent upon the special characteristics of the industry involved.” *Twin City*
22 *Sportservice, Inc. v. Charles O. Finley & Co., Inc.*, 676 F.2d 1291, 1299 (9th Cir. 1982). Products
23 need not be fungible to be included in a relevant market, but a relevant market “cannot
24 meaningfully encompass th[e] infinite range” of substitutes for a product. *Id.* at 1271 (quoting
25 *Times Picayune Publishing Co. v. United States*, 345 U.S. 594, 611, 612 n. 31, (1953)). The
26 overarching goal of market definition is to “recognize competition where, in fact, competition
27 exists.” *Brown Shoe*, 370 U.S. at 326; see also *U.S. v. Continental Can Co.*, 378 U.S. 441, 449

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1 (1964) (“In defining the product market between these terminal extremes [of fungibility and
2 infinite substitution], we must recognize meaningful competition where it is found to exist.”); *FTC*
3 *v. Whole Foods Market, Inc.*, 548 F.3d 1028, 1039 (D.C. Cir. 2008) (“As always in defining a
4 market, we must ‘take into account the realities of competition.’”) (citations omitted).

5 Courts have used both qualitative and quantitative tools to aid their determinations of
6 relevant markets. A qualitative analysis of the relevant antitrust market, including submarkets,
7 involves “examining such practical indicia as industry or public recognition of the submarket as a
8 separate economic entity, the product’s peculiar characteristics and uses, unique production
9 facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.”
10 *Brown Shoe*, 370 U.S. at 325; *see also, e.g., Klein v. Facebook, Inc.*, 580 F. Supp. 3d 743, 766–68
11 (N.D. Cal. 2022) (applying *Brown Shoe* factors). A common quantitative metric used by parties
12 and courts to determine relevant markets is the Hypothetical Monopolist Test (“HMT”), as
13 described in the U.S. Department of Justice and the FTC’s 2010 Merger Guidelines. U.S. Dep’t of
14 Justice & FTC, *Horizontal Merger Guidelines* (“2010 Merger Guidelines”) § 4 (2010); *see also,*
15 *e.g., U.S. v. H & R Block, Inc.*, 833 F. Supp. 2d 36, 51 (D.D.C. 2011) (“An analytical method
16 often used by courts to define a relevant market is to ask hypothetically whether it would be
17 profitable to have a monopoly over a given set of substitutable products. If so, those products may
18 constitute a relevant market.”).

19 There is “no requirement to use any specific methodology in defining the relevant market.”
20 *Optronic Techs., Inc. v. Ningbo Sunny Elec. Co., Ltd.*, 20 F.4th 466, 482 (9th Cir. 2021). As such,
21 courts have determined relevant antitrust markets using, for example, only the *Brown Shoe* factors,
22 or a combination of the *Brown Shoe* factors and the HMT. *See, e.g., Lucas Auto. Eng., Inc. v.*
23 *Bridgestone/Firestone, Inc.*, 275 F.3d 762, 766–68 (9th Cir. 2001) (relying on *Brown Shoe* factors
24 alone in review of district court’s determination of relevant market); *United States v. Aetna Inc.*,
25 240 F. Supp. 3d 1, 20–21 (D.D.C. 2017) (using HMT and *Brown Shoe* factors to analyze relevant
26 market). The Ninth Circuit has “repeatedly noted that the *Brown Shoe* indicia are practical aids
27 for identifying the areas of actual or potential competition and that their presence or absence does

1 not decide automatically the submarket issue.” *Thurman Indus., Inc. v. Pay ‘N Pak Stores, Inc.*,
2 875 F.2d 1369, 1375 (9th Cir. 1989) (citations omitted). The suitability of a submarket as a
3 relevant antitrust market “turns ultimately upon whether the factors used to define the submarket
4 are ‘economically significant.’” *Id.*

5 The FTC proposes a relevant product market consisting of VR dedicated fitness apps,
6 meaning VR apps “designed so users can exercise through a structured physical workout in a
7 virtual setting.” Mot. 13. According to the FTC, VR dedicated fitness apps are distinct from (1)
8 other VR apps and (2) other fitness offerings. *Id.* 14. To differentiate their proposed market from
9 other VR app markets, the FTC claims that VR dedicated fitness apps have distinct customers and
10 pricing strategies. *Id.* The FTC further argues that VR dedicated fitness apps are in a separate
11 market from other fitness offerings (*e.g.*, gyms, at-home fitness equipment) because they provide
12 users with “fully immersive, 360-degree environments,” are fully portable, save space, cost less,
13 and target a different type of consumer. *Id.* 14–15. The FTC claims that these qualitative product
14 differences satisfy the *Brown Shoe* practical indicia of a relevant market, and that the Hypothetical
15 Monopolist Test conducted by the FTC’s economics expert further confirms the relevant product
16 market definition. *Id.* 15.

17 Unsurprisingly, Defendants disagree. They claim that the FTC’s proposed market is
18 impermissibly narrow because it excludes “scores of products, services, and apps” that are
19 “reasonably interchangeable” with VR dedicated fitness apps, including dozens of VR apps
20 categorized as “fitness” apps on the Quest platform, fitness apps on gaming consoles and other VR
21 platforms, and non-VR connected fitness products and services. Opp. 8, ECF No. 216.
22 Defendants argue that members of the FTC’s proposed market subjectively consider other VR
23 apps and other fitness offerings to be competing products, and that several such products also
24 possess the very features—portability, immersion, and pricing models—that the FTC highlights as
25 distinguishing or unique to its proposed market. *Id.* 8–10. Defendants also contend that Dr.
26 Singer’s HMT analysis is fatally flawed due to methodological errors in the survey underlying the
27 test. *Id.* 11.

1 In this case, the Court finds the FTC has made a sufficient evidentiary showing that there
2 exists a well-defined relevant product market consisting of VR dedicated fitness apps.

3 **a. Brown Shoe Analysis**

4 The Court first examines in turn each of the *Brown Shoe* factors, *i.e.*, “practical indicia
5 [such] as industry or public recognition of the submarket as a separate economic entity, the
6 product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct
7 prices, sensitivity to price changes, and specialized vendors.” 370 U.S. at 325.

8 **i. Industry or Public Recognition**

9 The evidence indicates that Defendants and other VR dedicated fitness app makers viewed
10 VR dedicated fitness apps as an economic submarket of VR apps. For example, [REDACTED]

11 [REDACTED]
12 [REDACTED] PX0003, at 44. [REDACTED]

13 [REDACTED]
14 [REDACTED] *Id.* at 9. Within’s contemporaneous view of untapped market segments
15 indicates that a “fitness first” app paired with a VR headset—*i.e.*, a VR dedicated fitness app—
16 would be in a distinct segment of the overall VR market. *See id.* at 31. Likewise, as explained in
17 greater detail in the sections below, Meta repeatedly stated that VR dedicated fitness apps
18 constituted a distinct market opportunity within the VR ecosystem due to their unique uses,
19 distinct customers, and distinct prices. *See infra* Sections III.B.1.a.ii., iv., v. And a representative
20 the VR app company Odders Lab testified that the launch of its VR dedicated fitness app did not
21 diminish sales of its VR rhythm app, acknowledging that its VR fitness app “compete[d] more
22 directly with fitness dedicated applications than gaming applications.” Garcia Hr’g Tr. 1105:18–
23 1106:21. Industry companies’ internal communications showing frequent distinctions between
24 various categories of applications is “strong[] support” of a distinct submarket. *Klein*, 580 F.
25 Supp. 3d at 758.

26 Participants in the broader fitness industry also recognized VR fitness as a “separate
27 economic entity.” [REDACTED]

United States District Court
Northern District of California

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED] *See United States v. Microsoft Corp.*, 253 F.3d 34, 53
 16 (D.C. Cir. 2001) (rejecting inclusion of middleware products in the relevant market where
 17 middleware was a potential, rather than current, competitor).

18 Defendants claim that members of the VR dedicated fitness app industry understood the
 19 market in which they operated to consist of “[s]cores of products, services, and apps available to
 20 consumers who want to exercise.” Opp. 8; Milk Hr’g Tr. 724:15–25 (“ [REDACTED]
 21 [REDACTED]
 22 [REDACTED]
 23 [REDACTED]
 24 [REDACTED]); *id.* 779:7–8 (“We have thousands of competitors.”); *see also* Janszen Hr’g Tr. 1143:8–
 25 12 (VR dedicated fitness app VirZoom “compete[s] with somebody who wants to just jump on
 26 their bike and go for a bike ride”). Defendants also contend that “[e]stablished fitness and
 27 technology firms . . . view VR fitness as competitive with off-VR products,” and point as an

1 example to Apple’s inclusion of Supernatural and the Peloton Guide in the “competitive
 2 landscape” when it [REDACTED]
 3 [REDACTED].² Opp. 9; DX1257, at 3, 24–28.

4 Defendants’ evidence shows that there is a broad fitness market that includes everything
 5 from VR apps to bicycles. This in no way precludes the existence of a submarket constituting a
 6 relevant product market for antitrust purposes. *Brown Shoe*, 370 U.S. at 325; *Newcal Indus.*, 513
 7 F.3d at 1045. As the Ninth Circuit has noted, a relevant antitrust market “cannot meaningfully
 8 encompass th[e] infinite range” of substitutes for a product—yet this is exactly how Defendants
 9 propose to define the market. *Twin City Sportservice, Inc. v. Charles O’Finley & Co., Inc.*, 512
 10 F.2d 1264, 1271 (9th Cir. 1975). The Court therefore acknowledges that VR dedicated fitness
 11 apps compete for consumers with every manner of exercise (including gyms, bike rides, and
 12 connected fitness), but finds that Defendants and the broader fitness industry recognized VR
 13 dedicated fitness apps as an economically distinct submarket.

14 ii. Peculiar Characteristics and Uses

15 The evidence indicates that VR dedicated fitness apps have several “peculiar
 16 characteristics and uses” in comparison to both other VR apps and non-VR fitness offerings.
 17 *Brown Shoe*, 370 U.S. at 325. Even assuming “[a]lmost all VR applications require body
 18 movement,” Pruetz Hr’g Tr. 264:16, VR dedicated fitness apps are “specifically marketed to
 19 customers for the purpose of exercise,” *id.* 263:6–18. To support that marketing, VR dedicated
 20 fitness apps (unlike other VR apps) are often characterized by their fitness-specific features, such
 21 as trainer-led workout regimens, calorie tracking, and the ability to set and track progress toward
 22 fitness goals. *See, e.g., id.* 263:14–23; Paynter Dep. 24:2–12 (“what [Meta] used to call
 23 [dedicated] fitness apps now correspond to a category . . . call[ed] . . . trainer workout apps”);
 24 PX0487, at 4 (VR dedicated fitness apps are “[d]esigned to allow a player to deliberately set and
 25 attain fitness goals, with fitness-specific features i.e. coaching, trackable progress”); PX0001, at 5

26
 27 _____
 28 ² Apple does not currently offer a VR headset. *See, e.g.,* Bosworth Hr’g Tr. 1022:13–16.

1 n.10 (“Meta draws a distinction between apps designed to allow users to set and attain fitness
2 goals, with features like coaching and trackable progress (called ‘deliberate’ or ‘dedicated’ fitness
3 apps) and games whose primary focus is not fitness that allow users to get a workout as a
4 byproduct (sometimes called ‘incidental’ or ‘accidental’ fitness apps).”).

5 The most “peculiar characteristic” of VR dedicated fitness apps in comparison to non-VR
6 fitness offerings is, of course, the VR technology itself. A VR user is “embodied” in a virtual
7 environment. Zuckerberg Hr’g Tr. 1298:5–6. She is “teleported to a different place, feeling like
8 when you move your head and look around, you’re in a new space and seeing virtual things as if
9 they are real, which is virtual reality.” Rabkin Hr’g Tr. 835:24–836:3. Defendants’ fitness
10 industry expert, Dr. Vickey, submitted that non-VR fitness options could also be immersive,
11 describing the non-VR Hydrow rowing machine as an “immersive exercise piece of equipment”
12 because the Hydrow displayed video footage of various locations on a touchscreen the user viewed
13 while rowing.³ Vickey Hr’g Tr. 1184:12–21. The Court finds that no matter how crisp or
14 accurate a video may be, a two-dimensional screen display is inherently far less immersive than a
15 360-degree environment. The evidence does not suggest—and the Court is not aware of—any
16 other at-home fitness offering that can transport the user in this way. That a user of a VR
17 dedicated fitness app can exercise in a VR setting is, therefore, a “distinct core functionality”
18 indicative of a submarket. *Klein*, 580 F. Supp. 3d at 767 (quoting *Datel Holdings, Ltd. v.*
19 *Microsoft Corp.*, 712 F. Supp. 2d 974, 997 (N.D. Cal. 2010)).

20 The FTC puts forth other hallmarks of VR dedicated fitness apps that generally differ from
21 characteristics of non-VR fitness offerings. For example, the FTC argues that “VR headsets are
22 fully portable and take up little space.” Mot. 14. These appear to be distinguishing features in
23 relation to bulky connected fitness devices, such as the Peloton Bike or Hydrow rowing machine,
24 but Defendants persuasively argue that mobile fitness apps can offer these same functionalities.⁴

25

26 ³ Dr. Vickey later testified that he had not used a Hydrow, and that he “would have” evaluated the
27 machine by reviewing the company’s website and watching its videos. Vickey Hr’g Tr. 1202:8–
18.

28 ⁴ The Court is not persuaded by Defendants’ argument that the Peloton Guide is similarly portable
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1 Opp. 10. Nonetheless, the virtual reality fitness experience created by VR dedicated fitness apps
2 appears to be vastly different from a workout conducted on a large and stationary device or based
3 off a mobile phone screen.

4 With respect to “peculiar . . . uses,” Defendants have shown that consumers use non-VR
5 fitness offerings for exercise. *See supra* Section III.B.1.a.i. Defendants have additionally shown
6 that consumers may use other VR apps for fitness. *See, e.g.,* Carmack Hr’g Tr. 562:12–18 (“You
7 can work up a pretty good sweat in Beat Saber.”); PX0529, at 2 (“UXR reports that many users
8 have fitness intent among these [incidental fitness] apps”). As explained above, the existence of a
9 broader fitness market does not mean a relevant submarket does not exist. *Supra* Section
10 III.B.1.a.i. Defendants have themselves recognized the characteristics that distinguish VR
11 dedicated fitness apps from other VR apps. *E.g.,* PX0001, at 5 n.10 (“Meta draws a distinction
12 between apps designed to allow users to set and attain fitness goals, with features like coaching
13 and trackable progress (called ‘deliberate’ or ‘dedicated’ fitness apps) and games whose primary
14 focus is not fitness that allow users to get a workout as a byproduct (sometimes called ‘incidental’
15 or ‘accidental’ fitness apps.”); Milk Hr’g Tr. 683:8–21 (Supernatural, unlike Beat Saber,
16 “employed experts in movement and fitness[;] built companion apps for the phones and for heart
17 rate tracking integration[; and] calibrate[d to a] range of motion so that [it would not] injure
18 anybody.”); *see also* Koblin Hr’g Tr. 606:5–8 (“VR games that require some incidental physical
19 exertion” are not a fitness offering). The Court therefore finds that the “peculiar characteristics
20 and uses” factor of the *Brown Shoe* analysis supports the finding that VR dedicated fitness apps
21 constitute a relevant antitrust product market. *See, e.g., SC Innovations, Inc. v. Uber Techs., Inc.,*
22 434 F. Supp. 3d 782, 792 (N.D. Cal. 2020) (finding plaintiffs alleged a submarket for ride-sharing
23 services excluding taxis, in part due to distinguishing features such as ability to rate and review
24

25 _____
26 to a VR headset. *See* Opp. 10. _____

27 _____ Vickey Report ¶ 43 (“[T]he Peloton Guide uses augmented
28 reality features to track the user’s motions and a camera to position the user visually near an on-
screen instructor.”).

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1 drivers and share rides).

2 **iii. Unique Production Facilities**

3 The parties did not explicitly develop arguments regarding unique production facilities in
4 support of their positions regarding the relevant product market. *See* Mot. 13–16; Opp. 7–11. The
5 Court notes, however, that VR dedicated fitness apps require a unique combination of production
6 inputs. [REDACTED]

7 [REDACTED]
8 [REDACTED] *See* Singer Report ¶ 82 (“[T]he talent needed to
9 create true triple-A VR experiences is going to be scarce and really valuable in a few years.”)
10 (citing PX0118, at 1); Pruett Hr’g Tr. 286:6–8 (“I have an engineering team . . . [who] are a group
11 of veteran engineers who are particular experts in our VR technology and our hardware.”).

12 Similarly, most VR companies are unlikely to have the fitness expertise and equipment necessary
13 to create content for VR dedicated fitness apps. *See* Singer Report ¶ 84 (“[REDACTED]
14 [REDACTED]
15 [REDACTED]”) (citing
16 PX0251, at 2–3). Koblin Hr’g Tr. 650:3–12 (“[I]t seemed highly unlikely to me that [Meta] would
17 get into virtual reality fitness . . . honestly at that level of depth, it just seemed extremely unlikely
18 that they would hire coaches and build a green screen studio and dive deep into the psychology of
19 what makes fitness fitness.”); Garcia Hr’g Tr. 1079:16–24 (“[One of the things that we have done
20 in Odders Lab whenever developing any of our apps has always been looking into – – been
21 looking at the experts. . . . And for our fitness app, we also started reaching out to local experts.”).

22 Although relevant markets are generally defined by demand-side substitutability, supply-
23 side substitution also informs whether alternative products may be counted in the relevant market.
24 *Twin City Sportservice, Inc.*, 512 F.2d at 1271 (“While the majority of the decided cases in which
25 the rule of reasonable interchangeability is employed deal with the ‘use’ side of the market, the
26 courts have not been unaware of the importance of substitutability on the ‘production’ side as
27 well.”); *see also Brown Shoe*, 370 U.S. at 325 n.42 (“The cross-elasticity of production facilities

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1 may also be an important factor in defining a product market.”); Julian von Kalinowski et al.,
2 Antitrust Laws & Trade Regulation § 24.02[1][c], at 24–55 (2d ed. 2012) (“Another important
3 factor in defining a product market is the ability of existing companies to alter their facilities to
4 produce the defendant's product. . . . The Supreme Court has long recognized the significance of
5 this factor, often referred to as cross-elasticity of supply.”) (footnote omitted); 2010 Merger
6 Guidelines, § 5.1 & n.8 (high supply side substitutability may be used to aggregate products into a
7 market description).

8 Supply-side substitution focuses on suppliers’ “responsiveness to price increases and their
9 ability to constrain anticompetitive pricing by readily shifting what they produce.” *RAG-Stiftung*,
10 436 F. Supp. 3d at 293 (citing *Rebel Oil Co. v. Atlantic Richfield Co.*, 51 F.3d 1421, 1436 (9th Cir.
11 1995) (“reasonable market definition must also be based on ‘supply elasticity’”), *cert. denied*, 516
12 U.S. 987 (1995)). Here, as explained above, the evidence indicates that neither general fitness
13 firms nor general VR firms have the production facilities to readily produce a substitute VR
14 dedicated fitness app product, even if VR dedicated fitness apps were to raise prices and make
15 market entry more attractive. *See also* Singer Report, Section F (“Would-Be Suppliers of VR
16 Dedicated Fitness Apps Face Significant Barriers to Entry”). That existing companies are not
17 easily able to alter their facilities to produce VR dedicated fitness apps is additional evidence that
18 such apps constitute a distinct product market.⁵

19 **iv. Distinct Customers**

20 The FTC proffered evidence showing that users of VR dedicated fitness apps differ from
21 those of other VR apps along multiple axes. Internal evaluations by Meta and Within found that
22 although overall users of VR apps skewed younger and male, users of VR dedicated fitness apps
23 tended to have an older and more female user base. For example, Meta claimed in its response to
24 the FTC’s Second Request regarding the Meta-Within transaction that the overall Quest user base

25
26 ⁵ This supply-side analysis of whether other firms would be able to switch production to VR
27 dedicated fitness apps is independent of the demand-side inquiry (and main focus of the market
28 definition analysis) of whether users would switch consumption to other products in the event of a
price increase in VR dedicated fitness apps.

1 was about [REDACTED] See PX0004, at 167, May 2, 2022. VR fitness
 2 apps, on the other hand, drew far more women. *Id.* [REDACTED]
 3 [REDACTED]; PX0003, at 17 [REDACTED] Apr. 23,
 4 2021; PX0127, at 1 [REDACTED]
 5 [REDACTED] Mar. 10, 2021. Meta expected that VR dedicated fitness apps would
 6 expand the reach of virtual reality to new customer segments. To that end, Meta’s Vice President
 7 of Metaverse Content informed the company’s board of directors that “Supernatural, FitXR, and . .
 8 . other fitness applications, . . . unlike our gaming population . . . had tended to be more successful
 9 with on average an older person, on average more women. It was a very different demographic,
 10 and . . . we had always been in search of expanding VR beyond gaming into more of a general
 11 computing platform.” PX0066 (“Rubin Dep.”) 131:19–132:14; *see also* PX0127, at 6 (“[g]rowing
 12 [dedicated] fitness will broaden and diversify our user base, and bring on a disproportionate % of
 13 women).

14 Defendants acknowledge that VR fitness appeals to different user demographics than other
 15 VR apps. Opp. 5 (“Fitness is one such use case that can expand VR’s audience beyond gamers
 16 (who tend to be younger males) to a broader population (including older and female users.)”); *see*
 17 *also* Bosworth Hr’g Tr. 1035:18–22 (Meta perceived that “users of VR fitness apps represent[ed] a
 18 distinct category of customer compared to overall users of other VR apps on its platform”).

19 Defendants do, however, dispute that VR dedicated fitness apps have a customer base that is
 20 distinct from that of non-VR fitness offerings. Opp. 9 n.1. The evidence indicates that VR
 21 dedicated fitness apps are targeted more toward “[REDACTED]” who have less fitness
 22 experience and more difficulty finding motivating fitness products (rather than to individuals who
 23 have long-term or well-developed fitness routines.) As stated by Within’s executive vice president
 24 of business development and finance, it was “Within’s understanding that Supernatural appeals to
 25 [REDACTED] in a way that other existing fitness products do not.” PX0051 (“Cibula Dep.”)
 26 84:20–25. Within insiders also compared Supernatural to [REDACTED]
 27 [REDACTED]

1 [REDACTED] DX1081, at 1–2, Apr. 13, 2020. And in summer 2021—when Meta was in
 2 negotiations regarding the acquisition of Supernatural—a Meta employee described Within’s
 3 business model as “encouraging users who don’t think about fitness much as well as users with a
 4 light routine, not the fitness buff who is better served by the likes of Peloton cycling or Crossfit
 5 classes.” PX0318, at 1, June 22, 2021; [REDACTED]

6 [REDACTED]
 7 [REDACTED]
 8 [REDACTED] The Court finds the VR dedicated fitness apps have
 9 a customer base that is distinct from those of both other VR apps and several other fitness
 10 offerings— [REDACTED] *See, e.g., FTC v.*
 11 *Sysco Corp.*, 113 F. Supp. 3d 1, 29–30 (D.D.C. 2015) (finding relevant product market in part
 12 based on erstwhile competitors’ inability to serve certain types of customers).

13 **v. Distinct Prices**

14 The pricing of VR dedicated fitness apps likewise differs in at least one key respect from
 15 other VR apps and non-VR fitness offerings. The main difference in comparison to the former
 16 category is that VR dedicated fitness apps are more likely to have a subscription-based pricing
 17 model. As one of Within’s founders testified, Within’s daily release of new workout content
 18 requires ongoing revenue, which is supported by a subscription membership. Milk Hr’g Tr.
 19 671:10–19. Likewise, Meta’s Director of Content Ecosystem testified that “subscriptions are
 20 particularly good monetization strategies for [fitness] applications” because “fitness applications
 21 need to produce content on an ongoing basis . . . in order to not get boring.” Pruettt Hr’g Tr.
 22 269:9–23. However, subscription pricing does not provide a clear basis for delineating between
 23 VR dedicated fitness apps and other VR apps. Some VR dedicated fitness apps do not charge
 24 subscription fees, Vickey Report ¶ 47, and other VR apps may also be a good fit for subscription
 25 pricing, *see Pruettt Hr’g Tr.* 268:22–269:4 (the “fitness, productivity, and social genres . . . all seem
 26 to be trending towards subscriptions as a default monetization method”). Nonetheless, the
 27 evidence indicates that “the majority of the video game applications on the Quest platform are not

1 a good fit for subscriptions” including because “most of them don’t have [an] ongoing content
2 pipeline.” Pruet Hr’g Tr. 270:12–17.

3 Many fitness offerings, whether virtual or physical, use subscription models. As Meta
4 noted in its June 2022 white paper to the FTC, Supernatural’s “monthly subscription model . . . is
5 similar in structure to other connected fitness solutions included specialized equipment solutions
6 (*e.g.*, Peloton, Mirror, Tonal), paid apps (*e.g.*, Apple Fitness+), and other VR fitness apps (*e.g.*,
7 FitXR, Holofit, VZfit), as well as in-person gym memberships (*e.g.*, Equinox, CrossFit, 24 Hour
8 Fitness).” PX0001, at 2; *see also* DX1081, at 1–2 (listing subscription prices for “leading fitness
9 offering[s]”). The FTC argues that despite sharing a subscription pricing model, VR dedicated
10 fitness apps tend to be “far less expensive” than “other at-home smart fitness devices.” Mot. 14.
11 The evidence supports this assertion with respect to several connected fitness devices—
12 Supernatural, the most expensive VR dedicated fitness app,⁶ costs \$399 plus \$18.99 per month,
13 while Peloton costs \$1,445 plus \$44 per month and Tonal costs \$3,495 plus \$49 per month.
14 Singer Report ¶¶ 68–69. There are, however, digital fitness options—generally mobile phone
15 apps—with subscriptions “in the sort of \$8 to \$12 range.” Milk Hr’g Tr. 732:22–733:1; *see also*
16 DX1081, at 1–2 (noting \$12.99 Peloton app-only monthly subscription); Singer Report ¶ 65
17 (same).

18 The Court finds that the VR app and non-VR pricing evidence tilts slightly in favor of the
19 existence of a VR dedicated fitness app market. *See, e.g., FTC v. Tronox Ltd.*, 332 F. Supp. 3d
20 187, 200–01 (D.D.C. 2018) (“The existence of distinct prices . . . are ‘not what one would expect
21 if North American customers were willing and able to substitute one type of titanium dioxide for
22 another in response to a change in their relative prices.’”) (citations omitted). Testimony from
23 both Within and Meta indicate a practical reason for VR fitness apps to be generally best served
24

25 ⁶ Some VR dedicated fitness apps charge a one-time price over \$18.99, and another VR dedicated
26 fitness app has a free version as well as a premium version priced equally to Supernatural at
27 \$18.99 per month. All other VR dedicated fitness apps charge subscriptions lower than \$18.99 per
28 month, and one is free. Singer Report ¶ 39.

1 by a subscription pricing model, which is in line with broader non-VR fitness offerings. And VR
 2 dedicated fitness apps are much more affordable than the non-VR fitness products that come
 3 closest to offering the level of immersion available in VR. *See* Vickey Hr’g Tr. 1184:12–21
 4 (opining that touchscreen on Hydrow rowing machine provides immersive experience). However,
 5 in light of the evidence that there exist both other VR apps that can strategically employ a
 6 subscription model and non-VR fitness offerings that are comparably priced to VR fitness apps,
 7 the overall weight of this factor is lessened.

8 **vi. Sensitivity to Price Changes**

9 The sixth *Brown Shoe* factor evaluates the change in sales of a possible substitute product
 10 given a change in the price of products within the relevant market. Because this is in essence the
 11 same question posed by the HMT, *see FTC v. Staples*, 970 F. Supp. 1066, 1075 (D.D.C. 1997), the
 12 Court will not duplicate its analysis here. Drawing from that analysis, *see infra*, Section III.B.1.b.,
 13 the Court finds this factor to be neutral as to the existence of a VR dedicated fitness app market.

14 **vii. Specialized Vendors**

15 The final *Brown Shoe* factor considers whether a product’s distribution requires vendors
 16 with specialized knowledge or practices. *See Brown Shoe*, 370 U.S. at 325; *FTC v. Staples, Inc.*,
 17 190 F. Supp. 3d 100, 120–21 (D.D.C. 2016) (defining product market in part due to necessity that
 18 vendors have distinguishing capabilities such as sophisticated IT systems, personalized and high-
 19 quality service, and next-day delivery). The FTC has not presented evidence that the VR
 20 dedicated fitness app market requires specialized vendors.

21 * * *

22 For the reasons explained above, the Court finds that the following *Brown Shoe* “practical
 23 indicia” support the FTC’s assertion that VR dedicated fitness apps constitute the relevant product
 24 market: industry or public recognition; peculiar characteristics and uses; unique production
 25 facilities; distinct customers; and (to a lesser degree) distinct prices. These factors indicate that
 26 VR dedicated fitness apps present in-market firms with an economic opportunity that is distinct
 27 from both other VR apps and other fitness offerings. *See Thurman Indus., Inc.*, 875 F.2d at 1375.

1 The Court therefore finds that the FTC has met its burden of showing that VR dedicated fitness
 2 apps constitute a relevant antitrust product market. *Brown Shoe*, 370 U.S. at 325–28; *see also*
 3 *Lucas Auto. Eng.*, 275 F.3d at 766–68 (relying on *Brown Shoe* factors alone in review of relevant
 4 market); *Klein*, 580 F. Supp. 3d at 766–73 (same); *Newcal Indus.*, 513 F.3d at 1051 (“Even when a
 5 submarket is an *Eastman Kodak* submarket, though, it must bear the ‘practical indicia’ of an
 6 independent economic entity in order to qualify as a cognizable submarket under *Brown Shoe*.”).

7 **b. Hypothetical Monopolist Test (HMT)**

8 In the interests of thoroughness, the Court also addresses the parties’ HMT arguments.
 9 The HMT is a quantitative tool used by courts to help define a relevant market by determining
 10 reasonably interchangeable products. *Optronic Techs., Inc.*, 20 F.4th at 482 n.1. The test asks
 11 whether a “hypothetical monopolist that owns a given set of products likely would impose at least
 12 a small but significant and nontransitory increase in price (SSNIP) on at least one product in the
 13 market, including at least one product sold by one of the merging firms.” Singer Report ¶ 32; *see*
 14 2010 Merger Guidelines § 4.1.1. If enough consumers would respond to a SSNIP—often
 15 calculated as a five percent increase in price—by making purchases outside the proposed market
 16 definition so as to make the SSNIP not profitable, then the proposed market is defined too
 17 narrowly. Singer Report ¶ 32; *Optronic Techs., Inc.*, 20 F.4th at 482 n.1.

18 The FTC’s economics expert, Dr. Singer, conducted a hypothetical monopolist test on the
 19 VR dedicated fitness app market. Singer Report ¶¶ 49–68. To inform his analysis of the response
 20 to a SSNIP in the VR dedicated fitness app market, Dr. Singer commissioned Qualtrics to conduct
 21 “a survey of Supernatural users to determine what fitness apps they perceive to be a reasonably
 22 close substitutes to Supernatural and to VR dedicated fitness products generally.” *Id.* ¶ 60. Dr.
 23 Singer testified that although an economist’s natural path would be to collect data about
 24 Supernatural customers’ transactions and reactions to any price increases, such data was
 25 unavailable here because Supernatural has never changed its price from \$18.99 per month. Singer
 26 Hr’g Tr. 365:2–13. The survey was his “next best” option, and the approach is supported by the
 27 2010 Merger Guidelines. *Id.* 365:16–18; Singer Report ¶¶ 60–61; 2010 Merger Guidelines §

1 4.1.3. Based on his analysis of the survey, Dr. Singer determined that VR dedicated fitness apps
2 constituted a relevant market. Singer Hr’g Tr. 360:7–8.

3 Defendants deride Dr. Singer’s survey as “junk science” and urge this Court not to rely on
4 it. Opp. 11; Meta Closing Hr’g Tr. 1508:22–1509:3. In support of their arguments, Defendants
5 relied on the expert reports and testimony of Dr. Dube and Dr. Carlton, who the Court found
6 qualified as experts in the design and implementation of surveys and the economics of consumer
7 demand for branded goods, *see* Dube Hr’g Tr. 872:16–873:19, and industrial organizations and
8 microeconomics, *see* Carlton Hr’g Tr. 1355:15–20. Based on the testimony elicited by
9 Defendants from Dr. Singer, Dr. Dube, and Dr. Carlton, the Court is troubled by various apparent
10 flaws in the survey underlying Dr. Singer’s HMT. Most pertinently, there appear to be several
11 indications that a high fraction of the 150 surveyed individuals, on whose answers Dr. Singer’s
12 analysis necessarily relied, were untruthful in one or more responses. *See, e.g.*, Dube Hr’g Tr.
13 895:12–25 (respondents claimed to own multiple pieces of bulky, expensive equipment); Carlton
14 Report ¶ 93 (over two dozen respondents claimed to regularly use all 27 fitness products listed on
15 survey). Another facet of concern is the survey’s apparent inclusion of a non-VR product in the
16 question designed to capture a hypothetical monopolist’s pricing power in a VR-only market.
17 Carlton Hr’g Tr. 1428:21–1429:9. These questions, among others, suggest that the survey data
18 underlying Dr. Singer’s HMT analysis may not be reliable, which in turn casts doubt on the
19 conclusions to be drawn from the HMT.

20 The Court’s reservations about the survey do not change its finding that VR dedicated
21 fitness apps constitute a relevant antitrust product market. Because the Court bases its
22 determination of the relevant product market on its *Brown Shoe* analysis, *see supra* Section
23 III.B.1.a., rather than the HMT, it need not determine the validity of Dr. Singer’s survey
24 methodology. *See, e.g.*, Singer Hr’g Tr. 450:25–452:17. The *Brown Shoe* factors are sufficient to
25 inform the Court’s understanding of the “business reality” of the VR dedicated fitness app market.
26 *Lucas Auto. Eng.*, 275 F.3d at 766–68; *see also United States v. Anthem, Inc.*, 236 F. Supp. 3d
27 171, (D.D.C. 2017) (noting *Brown Shoe* factors supported the “business reality” of the

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1 government’s relevant market despite defense argument of “[in]sufficient economic rigor”); *RAG-*
 2 *Stiftung*, 436 F. Supp. 3d at 293 n.3 (“The *Brown Shoe* practical indicia may indeed be old school,
 3 and its analytical framework relegated ‘to the jurisprudential sidelines.’ But *Brown Shoe* remains
 4 the law, and this court cannot ignore its dictates.”) (citations omitted). Because the Court does not
 5 rely on the challenged portions of Dr. Singer’s report, the Court DENIES AS MOOT Defendants’
 6 motion to strike Dr. Singer’s opinion that VR dedicated fitness apps constitute a relevant product
 7 market.⁷ ECF No. 470.

8 2. Geographic Market

9 “The relevant geographic market is the ‘area of effective competition where buyers can
 10 turn for alternate sources of supply.’” *Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke’s Health*
 11 *Sys., Ltd.*, 778 F.3d 775, 784 (9th Cir. 2015) (citations omitted). “[I]n a potential-competition case
 12 like this one, the relevant geographic market or appropriate section of the country is the area in
 13 which the acquired firm is an actual, direct competitor.” *Marine Bancorporation*, 418 U.S. at 622.
 14 That is, the geographic market must “correspond to the commercial realities of the industry.”
 15 *Brown Shoe*, 370 U.S. at 336; *see also Staples*, 970 F. Supp. at 1073 (relevant geographic market
 16 is region where “consumers can practically turn for alternative sources of the product and in which
 17 the antitrust defendant faces competition”).

18 The FTC asserts that the United States is the relevant geographic market, and Defendants
 19 do not argue to the contrary. Mot. 15; *see generally* Opp. The Court agrees. As one of Within’s
 20 founders testified, Supernatural is only available to Quest headset users in the United States and
 21 Canada mainly [REDACTED]. Milk Hr’g Tr. 671:4–9.
 22 More broadly, Quest headsets are designed so that a user’s geolocation determines the availability
 23 and prices of content. Stojavljevic Hr’g Tr. 79:23–80:6. Because content developed in other
 24 countries may not be available in the United States, and because Supernatural is not available
 25

26 _____
 27 ⁷ Having independently reached the same conclusion as Dr. Singer regarding the relevant product
 28 market definition, the Court will rely on his subsequent analyses regarding the structure and
 characteristics of the defined market, which Defendants do not challenge. *See* ECF No. 470.
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1 outside of the United States and Canada, the Court finds that the United States is an appropriate
2 relevant geographic market. *See Staples*, 970 F. Supp. at 1073.

3 Accordingly, the relevant antitrust market for the analysis of the competitive impacts of
4 Meta’s acquisition of Within is VR dedicated fitness apps in the United States.

5 **C. Substantial Market Concentration**

6 The FTC has challenged Meta’s acquisition of Within on the basis that the merger would
7 substantially lessen potential competition. The Supreme Court has taken note of two species of
8 potential competition theories: actual potential competition and perceived potential competition.
9 *See United States v. Falstaff Brewing Corp.*, 410 U.S. 526 (1973); *United States v. Marine*
10 *Bancorporation, Inc.*, 418 U.S. 602 (1974). Although the two theories have different elements
11 and are grounded in different presumptions about the market, they share a common requirement:
12 they have “meaning only as applied to concentrated markets.” *Marine Bancorporation*, 418 U.S.
13 at 630–31. Because both doctrines posit that potential competitors can or will soon impact the
14 market, there would be no need for concern if the market is already genuinely competitive. *Id.*

15 In assessing whether the relevant market is “substantially concentrated,” the Supreme
16 Court sets forth a burden-shifting framework. First, the FTC may establish a prima facie case that
17 the relevant market is substantially concentrated by introducing evidence of concentration ratios.
18 *Id.* at 631. Once established, the burden shifts to the merging companies to “show that the
19 concentration ratios, which can be unreliable indicators of actual market behavior, did not
20 accurately depict the economic characteristics of the [relevant] market.” *Id.* If the prima facie
21 case is not rebutted, then the market is suitable for the potential competition doctrines. *See United*
22 *States v. Black & Decker Mfg. Co.*, 430 F. Supp. 729, 755 (D. Md. 1976).

23 **1. Market Concentration Ratios**

24 The Court finds that the FTC has sufficiently presented evidence using concentration ratios
25 as permitted by *Marine Bancorporation*. Here, the FTC has provided the Herfindahl-Hirschman
26 Index (“HHI”)—a widely accepted measure of industry concentration frequently used by courts
27 considering antitrust merger and acquisition actions—for the relevant market. FTC Proposed

1 Post-Hearing Findings of Fact (“FTC’s Findings”) ¶¶ 80–83, ECF No. 516; *Optronic Techs., Inc.*
 2 *v. Ningbo Sunny Elec. Co.*, 414 F. Supp. 3d 1256, 1263 (N.D. Cal. 2019), *aff’d*, 20 F.4th 466 (9th
 3 Cir. 2021). The FTC’s 2010 Merger Guidelines provide that a market is considered “moderately
 4 concentrated” when the HHI exceeds 1500 and “highly concentrated” when it exceeds 2500. 2010
 5 Merger Guidelines § 5.3.

6 The FTC’s expert, Dr. Singer, calculated the HHI multiple times, accounting for different
 7 market definitions and stipulations. Dr. Singer first calculated the HHI by measuring each firm’s
 8 market share using revenue. Singer Report ¶ 75, Table 2-A. This yielded an HHI of 6,917, [REDACTED]
 9 [REDACTED] *Id.* Dr. Singer also calculated the market’s HHI
 10 using “total hours spent” and “average monthly active users” as metrics and data collected from
 11 the Quest Store. Singer Rebuttal Report ¶¶ 124–25, Tables 1-A, 1-B. The HHI for “total hours
 12 spent” was 6,307; and for “monthly active users” was 3,377. *Id.*

13 The Court finds that—regardless of the metrics used—every one of these ratios reflect a
 14 market concentration well above what the Merger Guidelines have designated as “highly
 15 concentrated.” Accordingly, the FTC have made their prima facie showing, and the burden shifts
 16 to Defendants to “show that the concentration ratios . . . did not accurately depict the economic
 17 characteristics of the [relevant] market.” *Marine Bancorporation*, 418 U.S. at 631.

18 2. Defendants’ Pleading Challenges

19 Before continuing to Defendants’ substantive arguments seeking to rebut the FTC’s prima
 20 facie case, the Court first turns to the Defendants’ legal attacks on the FTC’s pleadings.
 21 Defendants argue that the FTC’s case stumbles right out of the blocks because the complaint does
 22 not allege oligopolistic or “interdependent or parallel behavior.” Mot. Dismiss FAC (“MTD”) 10–
 23 13, ECF No. 108. Defendants’ position arises from the following language in *Marine*
 24 *Bancorporation*:

25 The potential-competition doctrine has meaning only as applied to concentrated
 26 markets. That is, the doctrine comes into play only where there are dominant
 27 participants in the target market engaging in interdependent or parallel behavior
 and with the capacity effectively to determine price and total output of goods or
 services.

1 418 U.S. at 631.

2 Defendants' argument is unpersuasive. Their fidelity to a stilted and strained reading of
 3 the Supreme Court's commentary conveniently dodges the actual burden-shifting framework that
 4 *Marine Bancorporation* set forth and applied. *Id.* at 631–32. In fact, the Supreme Court held that
 5 the district court had erred by taking the precise course of action that Defendants urge the Court
 6 takes here, *i.e.*, requiring the FTC to allege parallel behavior when it is Defendants' burden to
 7 present the absence. *Id.* (“In our view, *appellees did not carry this burden*, and the District Court
 8 erred in holding to the contrary. Appellees introduced no significant evidence of the absence of
 9 parallel behavior in the pricing or providing of commercial bank services in [the relevant
 10 market].”) (emphasis added). A similar attempt to stretch the language from *Marine*
 11 *Bancorporation* to pin the burden on the government was likewise unsuccessful. *Black & Decker*,
 12 430 F. Supp. at 750 n.41 (rejecting argument that “the government has failed to produce evidence
 13 of any interdependent or parallel behavior in the market or of the market firms' capacity to
 14 determine price and total output”). Defendants also are unable to identify any authority that has
 15 adopted its proposed inversed framework, not even the one Fifth Circuit decision they cited. *See*
 16 MTD 6; *Republic of Texas Corp. v. Bd. of Governors*, 649 F.2d 1026, 1045–46 (5th Cir. 1981)
 17 (“Concentration ratios of this magnitude establish here . . . a prima facie case that the [] market is a
 18 candidate for the potential competition doctrine, and *shift to Republic the burden to show that the*
 19 *concentration ratios . . . do not accurately depict the economic characteristics of the [] market.*”)
 20 (emphasis added).

21 For all the reasons discussed, Defendants' theory that the FTC was required to plead
 22 oligopolistic, interdependent, or parallel behavior is without merit. To the extent Defendants'
 23 motion to dismiss the FAC is premised on this theory, the Court DENIES Defendants' motion.

24 3. Economic Characteristics of the “VR Dedicated Fitness App” Market

25 The FTC having established a prima facie case of “substantial concentration” using
 26 concentration ratios, the burden now shifts to Defendants to rebut that showing that “the
 27 concentration ratios . . . did not accurately depict the economic characteristics of the [relevant]

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1 market.” *Marine Bancorporation*, 418 U.S. at 631. The touchstone inquiry, however, appears to
 2 be whether the relevant market “is in fact genuinely competitive.” *Marine Bancorporation*, 418
 3 U.S. at 631; *Tenneco, Inc. v. FTC*, 689 F.2d 346, 353 (2d Cir. 1982) (finding the FTC was “fully
 4 justified in concluding that the [] market was not genuinely competitive”); *Republic of Texas*, 649
 5 F.2d at 1046 (finding that rebuttal evidence did not “establish that the overall competition from the
 6 thrift institutions was sufficient”); *Black & Decker*, 430 F. Supp. at 755 (noting that “various
 7 facets of competitive performance in the gasoline powered chain saw market offer conflicting
 8 indications”). The Court addresses each argument that Defendants have raised in rebuttal.

9 The Court first makes an opening observation that there appear to be at least some
 10 characteristics of the market that may be difficult to express with concentration ratios. If nothing
 11 else, both parties seem to agree that the VR dedicated fitness app market is a nascent and emerging
 12 market, which would be an economic characteristic of the market not fully captured by the
 13 concentration ratios. *See* FTC’s Findings ¶¶ 68–69; Singer Report ¶ 92. However, the Court must
 14 consider whether those characteristics indicate that the market is genuinely competitive.

15 Nascency. The Court has received conflicting expert evidence from both parties as to
 16 whether nascent markets are more or less vulnerable to coordinated oligopolistic behaviors. Dr.
 17 Carlton submits that a nascent market with rapidly evolving products is more difficult to
 18 coordinate behaviors, while Dr. Singer has asserted that there is no accepted economic theory to
 19 support the segmentation of nascent, adolescent, or mature markets. *Compare* Carlton Report ¶¶
 20 127–29, *with* Singer Rebuttal Report ¶¶ 130-33.

21 The evidence presented suggests that companies in the VR dedicated fitness market do not
 22 exhibit revenue or profit-maximizing behaviors, such as price competition. Koblin Hr’g Tr.
 23 636:11–14; Milk Hr’g Tr. 736:6–8. Instead, their strategies appear to be optimized for growth and
 24 penetration—[REDACTED]—with the expectation that those qualities will
 25 render them an attractive acquisition target. *See, e.g.*, Milk Hr’g Tr. 736:15–21 (“[REDACTED]

26 [REDACTED]
 27 [REDACTED]

1 [REDACTED].”); Zyda Hr’g Tr. 1227:18–22, 1228:15–18 (“[S]tartups that work in the VR
2 space can get acquired, and that’s pretty much the dream of almost every startup.”); Garcia Hr’g
3 Tr. 1111:8–1112:14; Janszen Hr’g Tr. 1147:22–1148:1. It is unclear to the Court how this
4 departure from conventional profit-maximization strategies—an assumption often made in
5 defining antitrust markets, *see* 2010 Merger Guidelines § 4.1.1 (noting that the HMT “requires [] a
6 hypothetical profit-maximizing firm”)—should affect the assessment of genuine competition in
7 this market.⁸

8 Notwithstanding the experts’ robust economics discussions, neither party has presented the
9 Court with a working definition of “nascency,” such that it can distinguish a nascent market from
10 a more mature market. Rather, the parties appear to use the “nascency” label—however the lines
11 are drawn—as a proxy for other more observable market descriptions, such as highly
12 differentiated products, unstable market shares, and new entrants. Carlton Report ¶¶ 127–29.
13 Accordingly, the Court will give limited weight to the fact that the VR dedicated fitness market
14 may be characterized as a nascent market and focus instead on the underlying market indicators.

15 Market Share Volatility. Dr. Carlton claims that the VR dedicated fitness market exhibits
16 changing market shares, but he does not provide any historical data or evidence that the market
17 shares have changed over time. Carlton Report ¶¶ 124–25. Instead, Dr. Carlton relies on the fact
18 that none of the apps were in existence five years ago, that new entries are occurring, and on Dr.
19 Singer’s data on changes in *other* VR app markets. *Id.* ¶ 125. But new entrants do not necessarily
20 result in shifting or deconcentrating market shares, and Defendants have not presented evidence of
21 actual historical shifts in shares for the relevant market here. Moreover, [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED] *Id.* ¶ 67, Table 10.

25 New Entrants. Defendants and Dr. Carlton have made much ado about the incoming

26 _____
27 ⁸ Indeed, the many novel questions of law presented by this case may signal an ill fit between
28 these long-standing antitrust doctrines and the structures of modern technology markets.

1 entrants and the fact that the FTC’s relevant market has effectively doubled since the initiated this
 2 litigation. *See, e.g.*, Opp. 14. Although the “introduction of new firms and fluid condition of
 3 market entry and exit can indicate competitive behavior,” the bottom line is that these new entrants
 4 have not significantly deconcentrated the market, nor do they suggest a trend towards such
 5 deconcentration. *Black & Decker*, 430 F. Supp. at 751; *see also* Singer Rebuttal Report ¶¶ 124–
 6 25, Tables 1-A, 1-B (indicating *de minimis* shares of new entrants).

7 Barriers to Entry. Defendants rely on the new entrants into the market as evidence that
 8 barriers to entry are low. Opp. 13. However, the number of new entrants “does not belie the
 9 substantial entry barriers characteristic of the [relevant] market.” *Black & Decker*, 430 F. Supp. at
 10 751. The evidence presented suggest that barriers to entry are existent but are not insurmountable.
 11 As the Court discusses further in this order, there are several ingredients required for a potential
 12 entrant considering entry into the VR dedicated fitness app entrant, including financial resources,
 13 VR engineering resources, fitness experience and content creation, and studio production
 14 capabilities. *See infra* Section III.D.2.a. On the other hand, for most potential entrants into any
 15 VR app market, Meta provides grants, software development kits, infrastructure code, and even
 16 engineering support to third-party VR app developers. Pruetz Hr’g Tr. 284:18–285:18.

17 Having considered the VR dedicated fitness app market’s nascency, volatility, new
 18 entrants, barriers to entry, and price competition, the Court is inclined to find that Defendants have
 19 not rebutted the FTC’s prima facie case. The Court certainly appreciates that a nascent market
 20 with an emerging technology may have some features and market incentives that are not captured
 21 by concentration ratios. However, the evidence does not support a finding that the VR dedicated
 22 fitness app market exhibits the characteristics or desirable behaviors of a competitive market. And
 23 as the Supreme Court noted in *Falstaff Brewing*, the absence of “blatantly anti-competitive
 24 effects” may not necessarily preclude the propriety of potential competition theories, because the
 25 high degree of market concentration indicates that the “seeds of anti-competitive conduct are
 26 present.” 410 U.S. 526, 550; *see also id.* n.15 (“[A] market might be so concentrated that even
 27 though it is presently competitive, there is a serious risk that parallel pricing policies might emerge

1 sometime in the near future.”).

2 That said, because the Court finds *infra* that the FTC has not satisfied the other elements of
3 the potential competition theories they have brought, the Court need—and does not—decide
4 whether the Defendants’ showing here is sufficient to rebut the FTC’s prima facie case on
5 substantial concentration. *See United States v. Siemens Corp.*, 621 F.2d 499, 506 (2d Cir. 1980).

6 **D. Actual Potential Competition**

7 The FTC first argues that the Acquisition would substantially lessen competition because it
8 deprives the VR dedicated fitness app market of the competition that would have arisen from
9 Meta’s independent entry into the market, a theory known as the “actual potential competition” or
10 “actual potential entrant” doctrine. *See, e.g., United States v. Marine Bancorporation, Inc.*, 418
11 U.S. 602, 633 (1974). Although the Supreme Court has twice declined to resolve the doctrine’s
12 validity when presented, it has nonetheless identified two essential preconditions before the theory
13 can be applied: (1) the alleged potential entrant must have “available feasible means for entering
14 the [relevant] market other than by acquiring [the target company]”; and (2) those “means offer a
15 substantial likelihood of ultimately producing deconcentration of that market or other significant
16 procompetitive effects.” *Id.* The doctrine has since been applied by Courts of Appeal and district
17 courts alike, though the Ninth Circuit has not yet had an opportunity to provide guidance on the
18 actual potential competition theory.

19 Although “available feasible means” for entry may be established either by *de novo* entry
20 or a toehold acquisition, the FTC has not argued that Meta could have entered the relevant market
21 through a toehold acquisition, nor does it identify any company in the relevant market that could
22 have served as such a target. *See, e.g., FAC* ¶ 57; Mot. 19. “Since the [FTC] offered no evidence
23 of a toe-hold purchase that was available and attractive to [Meta], any such theory must be
24 rejected for lack of proof.” *United States v. Siemens Corp.*, 621 F.2d 499, 508 (2d Cir. 1980).
25 Accordingly, the Court will only consider whether Meta had “available feasible means” for
26 entering the relevant market *de novo*.

1 **1. Threshold Issues**

2 Before discussing the evidence, the Court first turns to three threshold disputes of law
3 between the parties, which are: (1) the continued vitality of the actual potential competition
4 theory; (2) the standard of proof the FTC must meet; and (3) the roles and consideration of
5 objective and subjective evidence.

6 **a. Doctrinal Validity**

7 Throughout this litigation, Defendants have sought to cast doubt as to the very existence of
8 the actual potential competition theory because it has never been fully endorsed by the Supreme
9 Court. *See, e.g.*, Opp. 2; MTD, at 2, 16–17. Notwithstanding Defendants’ doubts, this doctrine
10 has been applied by multiple Circuit Courts of Appeal, *e.g.*, *Yamaha Motor Co. v. FTC*, 657 F.2d
11 971 (8th Cir. 1981); *United States v. Siemens Corp.*, 621 F.2d 499 (2d Cir. 1980); *FTC v. Atl.*
12 *Richfield Co.*, 549 F.2d 289 (4th Cir. 1977); the Federal Trade Commission itself, *Altria Group,*
13 *Inc.*, 2022 WL 622476 (Feb. 23, 2022); *B.A.T. Industries*, 1984 WL 565384 (Dec. 17, 1984); and
14 various district courts, including one that ordered divestiture upon a finding of actual potential
15 competition and whose judgment was affirmed by the Supreme Court. *United States v. Phillips*
16 *Petroleum Co.*, 367 F. Supp. 1226 (C.D. Cal. 1973), *aff’d sub nom. Tidewater Oil Co. v. United*
17 *States*, 418 U.S. 906 (1974), and *aff’d*, 418 U.S. 906 (1974). Given the actual potential
18 competition doctrine’s consistent, albeit distant, history of judicial recognition, the Court declines
19 to reject the theory outright and will apply the doctrine as developed. *See FTC v. Steris Corp.*,
20 133 F. Supp. 3d 962, 966 (N.D. Ohio 2015) (“[T]he FTC has clearly endorsed this theory by filing
21 this case, and the administrative law judge will be employing it during the proceeding. . . .
22 Accordingly, in deciding the likelihood of success on the merits, the Court will assume the validity
23 of this doctrine.”).

24 To the extent Defendants’ motion to dismiss sought dismissal of the FTC’s actual potential
25 competition claim on the basis that it is a “dead-letter doctrine,” ECF No. 108, at 2, Defendants’
26 motion is DENIED.

b. Standard of Proof

1 There is less consistency among courts as to the proper standard of proof by which the
 2 FTC must prove its case on actual potential competition, and it is an issue of first impression
 3 within the Ninth Circuit. The Fourth Circuit has held that the FTC must establish its case with
 4 “strict proof.” *Atl. Richfield*, 549 F.2d at 295. The Second Circuit has asked whether a defendant
 5 “would likely have entered the market in the near future.” *Tenneco, Inc. v. FTC*, 689 F.2d 346,
 6 352 (2d Cir. 1982) (emphasis added). The Fifth Circuit adopted the “reasonable probability”
 7 standard, which it remarked “signifies that an event has a better than fifty percent chance of
 8 occurring [with a] ‘reasonable’ probability represent[ing] an even greater likelihood of the event’s
 9 occurrence.” *Mercantile Texas Corp. v. Bd. of Governors*, 638 F.2d 1255, 1268–69 (5th Cir.
 10 1981). The Eighth Circuit also appeared to adopt the “reasonable probability.” *Yamaha Motor*,
 11 657 F.2d at 977 (defining the inquiry as “would [defendant], absent the joint venture, *probably*
 12 have entered the [relevant] market independently”) (emphasis added). Finally, the FTC itself has
 13 unambiguously adopted a “clear proof” standard. *B.A.T. Industries*, 1984 WL 565384, at *10.

14 In the absence of guiding Ninth Circuit law, the Court begins with *Brown Shoe*’s teaching
 15 that Section 7 deals with neither certainties nor ephemeral possibilities but rather “probabilities.”
 16 *Brown Shoe Co. v. U.S.*, 370 U.S. 294, 323 (1962). In the context of an actual potential
 17 competition claim, however, the Court must not only consider the effects of future scenarios where
 18 the Acquisition occurs and where it is blocked, but it must also gauge the likelihood—in the
 19 second scenario—that the blocked would-be acquirer would enter the relevant market
 20 independently. Furthermore, the harm to competition the doctrine aims to prevent is not the loss
 21 of *present* competition but rather the potential loss of a *future* competitor (the acquiring company).
 22 Given the many *a priori* inferences required by the doctrine, the Court is wary of any inquiry that
 23 strays too close to the specters of ephemeral possibilities, yet it must nonetheless ensure the
 24 standard does not require the FTC to operate on certainties. The Court accordingly holds that the
 25 “reasonable probability” standard—as clarified by the Fifth Circuit to suggest a likelihood
 26 noticeably greater than fifty percent—is the standard of proof that the FTC must present.
 27

1 To the extent Defendants’ motion to dismiss is based on the assertion that the correct
2 standard of proof is “clear proof,” the Court DENIES Defendants’ motion.

3 **c. Objective vs. Subjective Evidence**

4 Finally, the Court reaches the parties’ disagreement as to the roles of objective and
5 subjective evidence. The FTC asserts that it may meet its burden using solely objective evidence
6 regarding Meta’s “overall size, resources, capability, and motivation.” Mot. 18–19; *see also* FTC
7 Closing Hr’g Tr. 1494:12–18. Defendants, meanwhile, strenuously emphasize subjective
8 evidence that Meta never had any plan to enter the Relevant Market *de novo* and would not do so
9 if the Acquisition is blocked. Opp. 15.

10 Courts have uniformly recognized the highly probative value of objective evidence in
11 evaluating whether a potential entrant is reasonably probable to enter the market *de novo*; the
12 disagreement only arises as to whether plaintiffs can satisfy their burden using only objective
13 evidence and whether subjective evidence should warrant any consideration. *Compare Mercantile*
14 *Texas*, 638 F.2d at 1270 (“Not only is objective evidence undeniably probative, but subjective
15 evidence is not required to establish a violation of the Clayton Act standard. On remand, the
16 Board may rely exclusively on objective evidence if that evidence is sufficient to support the
17 findings we require.”) (internal citation omitted), *with B.A.T. Industries*, 1984 WL 565384, at *26
18 (noting that “the inherent limitations of economic evidence mean that, standing alone,” purely
19 objective evidence could not “establish liability under the actual potential entrant theory”) (Bailey,
20 Comm’r, concurring). Many courts have also consulted both objective and subjective evidence in
21 reaching their conclusions. *See, e.g., Siemens*, 621 F.2d at 507; *Yamaha Motor*, 657 F.2d at 979;
22 *Phillips Petroleum*, 367 F. Supp. at 1239 (recognizing that subjective evidence is “relevant and
23 entitled to consideration, [but] cannot be determinative”).

24 Here, the Court will first consider whether the objective evidence presented by the FTC
25 supports the findings and conclusions necessary to satisfy the actual potential competition
26 doctrine. If the objective evidence is weak, inconclusive, or conflicting, the Court will consult
27 subjective evidence to illuminate the ambiguities left by the objective evidence, with the

1 understanding that the subjective evidence cannot overcome any directly conflicting objective
 2 evidence. *See Falstaff Brewing*, 410 U.S. at 570 (“[T]he subjective evidence may serve as a
 3 counterweight to weak or inconclusive objective data. But when the district court can point to no
 4 compelling reason why the subjective testimony should be believed or when the objective
 5 evidence strongly points to the feasibility of entry *de novo* . . . it is error for the court to rely in any
 6 way upon management’s subjective statements.”).

7 2. Objective Evidence

8 Having disposed of the threshold questions, the Court now proceeds to apply the doctrine.
 9 The inquiry can be stated as follows: “Is it reasonably probable that Meta would have entered the
 10 VR dedicated fitness app market *de novo* if it was not able to acquire Within?”⁹

11 “In exploring the feasible means of entry alternative to the challenged acquisition, the court
 12 must analyze the incentive and capability of the acquiring firm to enter the relevant market.”

13 *Black & Decker*, 430 F. Supp. at 755. The Court thus considers in turn the objective evidence on
 14 Meta’s capabilities and incentives to enter the VR dedicated fitness app market.

15 a. Capabilities of Entry

16 There can be no serious dispute that Meta possesses the financial resources to undertake a
 17 *de novo* entry. Meta has spent over \$12.4 billion in the most recent fiscal year on its VR business,
 18 and it anticipates investing more in the VR space. *See, e.g.*, DX1237, at 51, Dec. 31, 2021; ECF
 19 No. 514, Defs.’ Proposed Post-Hearing Findings of Fact (“Defs.’ Findings”) ¶¶ 44–47.

20 Unsurprisingly, Meta also enjoys a deep and talented pool of engineers in its Reality Labs
 21 Division, who could provide the technical VR expertise to develop a VR dedicated fitness app
 22 should Meta so choose. *See* ECF No. 516, FTC Proposed Post-Hearing Findings of Fact (“FTC’s
 23 Findings”) ¶¶ 32–33. In fact, Meta maintains a team of “veteran engineers who are particular
 24 experts in [Meta’s] VR technology and hardware” and who work directly with third-party VR app
 25 developers to “improve the quality of their software or help them fix bugs or [] polish the

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 27 ⁹ As noted above, because the FTC has not argued that Meta could have entered the relevant
 28 market through a toehold acquisition, the Court considers only the question of *de novo* entry.
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1 experience that the developer is building.” Pruetz Hr’g Tr. 286:4–12. The Court finds that the
2 objective evidence establishes that Meta has the financial resources and ready access to qualified
3 VR engineers to enter the VR dedicated fitness app market *de novo*.

4 But financial and engineering capabilities alone are insufficient to conclude it was
5 “reasonably probable” that Meta would enter the VR dedicated fitness app market. Indeed, Meta
6 seems willing to concede—as is supported by the evidence—that it “does not take a large team or
7 substantial resources to make a successful VR app.” Defs.’ Findings ¶ 53. Instead, courts often
8 counterbalance undisputed financial capabilities with those capabilities unique to the relevant
9 market, rarely relying solely on the potential entrant’s substantial wherewithal. *Siemens*, 621 F.2d
10 at 507 (finding no evidence that potential entrant could “transfer its acknowledged capability with
11 respect to other types of equipment to *nuclear medical equipment*”) (emphasis added); *Atl.*
12 *Richfield*, 549 F.2d at 295 (“[Potential entrant] has no technological skills readily transferrable to
13 the *copper markets*; it has no channels of distribution which may be utilized to distribute
14 copper.”) (emphasis added); *cf. Yamaha Motor*, 657 F.2d at 978 (noting that the potential entrant
15 had “requisite experience in the production and marketing of *outboard motors* in areas of the
16 world other than Japan.”) (emphasis added). The Court here finds that Meta lacked certain
17 capabilities that are unique and critical to the VR dedicated fitness app market. *See* PX0127, at 7
18 (noting that Meta “will need to build 4 new [fitness] functions that are not part of Facebook’s
19 pipelines; Content development, instructors, studio production . . . , music rights & technology.”).

20 First and foremost, although Meta has an abundance of VR personnel on hand, it lacks the
21 capability to create fitness and workout content, a necessity for any fitness product or market. *See*
22 PX0111 (“The answer is content creation. . . . You need that content variety to serve different
23 ability levels, musical tastes, instructor personalities, etc.”), Feb. 23, 2021. As a comparison,
24 Supernatural’s VR workouts are led by personal trainers and are optimized for VR activity
25 through consultations with experts holding PhDs in kinesiology and biomechanics. PX0712, at
26 18, 27. Certainly, this absence is not an insurmountable obstacle; Meta could conceivably
27 circumvent it by partnering with an established fitness brand to provide the fitness content, as

1 Odders Lab did with Les Mills.¹⁰ FTC’s Findings ¶¶ 123, 148; *see also* Garcia Hr’g Tr. 1072:18–
 2 1073:1. [REDACTED]
 3 [REDACTED]
 4 [REDACTED]
 5 [REDACTED]
 6 [REDACTED]
 7 [REDACTED] *see also Tenneco*, 689 F.2d at 354 (rejecting as “unsupported
 8 speculation” the FTC’s suggestion that the potential entrant would have entered the market *de*
 9 *novo* “with the aid of a license” for necessary technology). Regardless of any potential
 10 workarounds, the objective fact that Meta presently lacks the capability to create fitness content is,
 11 at the very least, probative as to the reasonable probability that Meta would enter the VR dedicated
 12 fitness app market *de novo*.

13 In addition to fitness content, the evidence also indicates that Meta lacked the necessary
 14 studio production capabilities to create and film VR workouts. Once again comparing to
 15 Supernatural, Within records daily workout classes in its Los Angeles studio, and its founders
 16 have directed several interactive music videos. PX0712, at 3–4, 29. When Meta employees were
 17 strategizing VR fitness investments, they recognized that “studio production (e.g. green screen
 18 ops, stereoscopic capture, post processing pipelines)” was a new function that was “not part of
 19 Facebook’s pipelines.”¹¹ PX0127, at 7, Mar. 10, 2021. Contrary to the FTC’s suggestion, the
 20 Court finds that Meta’s acquisition of Armature Studio—a third-party VR studio with expertise in
 21 co-developing VR apps—does not provide the necessary studio production capabilities to develop
 22 a VR dedicated fitness app. *See* FTC’s Findings ¶¶ 125, 290. The evidence indicates that
 23

24 _____
 25 ¹⁰ The Court can imagine more scenarios, *e.g.*, where Meta contracts independent fitness
 26 instructors or employs a team of regular fitness instructions, but they would require further
 27 speculation.

28 ¹¹ To clarify, the Court cites this internal Meta strategy document for its identification of functions
 that are *objectively* absent from Meta’s capabilities, and not for any probative value in determining
 Meta’s *subjective* intention, such as whether those absences are sufficient to deter it from entering
 the VR dedicated fitness app market *de novo*.

1 Armature is very much a *game* studio, not a *production* studio [REDACTED]
 2 [REDACTED] PX0527, at 6 (listing Armature’s
 3 [REDACTED] The FTC highlights an internal Meta
 4 presentation that presented Armature as an acquisition target who could “build a fitness-first
 5 product based on Beat Saber x their sports experience.” *Id.* However, the basis for this suggestion
 6 comes not from any prior production studio experience but rather Armature’s experience
 7 developing the rendered VR video game, Sports Scramble. *Id.* As with Meta’s fitness expertise,
 8 its lack of production studio capabilities to film a VR fitness workout is a relevant—though less
 9 compelling—factor for the Court’s “reasonably probable” consideration.

10 **b. Incentives to Enter**

11 In addition to the objective evidence presented of Meta’s capabilities of entering the VR
 12 dedicated fitness app market, the Court also considers the objective evidence of Meta’s incentives
 13 and motivations for entering this market.

14 Users and Growth. The record is replete with evidence supporting Meta’s interest in the
 15 VR fitness space. Defs.’ Findings ¶ 280 (“[E]mployees at Reality Labs were interested in fitness
 16 as a promising VR use case”). First, fitness is a use for VR that appeals to a more diverse
 17 population, specifically consumers that are female and older. *Id.* ¶ 280 (citing testimony). This
 18 demographic is notably distinct from the typical VR demographic, which tends to skew younger
 19 and more male. *Id.*; *see also Black & Decker*, 430 F. Supp. at 756 (“[C]ommitment to
 20 diversification is an important factor to be considered in analyzing [] desire to enter a particular
 21 market.”). Fitness is also “retentive,” meaning that users will tend to regularly use the product or
 22 app. PX0386, at 12 (fitness apps had a “strong [REDACTED] retention”), Apr. 12, 2022; *see*
 23 *Stojasavljevic Hr’g Tr.* 108:19–25. Meta’s internal data also indicated that “deliberate fitness apps”
 24 were the “fastest growing segment” with [REDACTED] year-over-year growth. PX0386, at 12. These
 25 promising demographic, use, and growth metrics are especially important to Meta, because it has
 26 “bet[] on VR technology as a general computing platform to join today’s PCs, laptops,
 27 smartphones, and tablets.” Defs.’ Findings ¶ 44.

1 Although they undergird Meta’s undisputed interest in VR fitness, the aforementioned
 2 factors provide limited probative value in assessing Meta’s likelihood to enter the VR dedicated
 3 fitness app market itself. As the Court established earlier in this section, the relevant inquiry is
 4 whether it is “reasonably probable” that Meta would have entered the VR dedicated fitness app
 5 market *de novo*, not whether Meta was excited about or interested in more generally investing in
 6 VR fitness. Meta’s interest in the promising VR fitness app metrics—diverse appeal, strong user
 7 retention, rapid growth—stems from the potential for broader VR adoption and market
 8 penetration. *See* Carlton Report ¶¶ 33–35. And Meta, as a competitor in the VR headset market,
 9 benefits from that growth so long as high-quality VR fitness apps exist in the VR ecosystem; Meta
 10 need not itself be a player in that ecosystem. *See* Defs.’ Findings ¶ 49. This mutually beneficial
 11 relationship between the VR platform and third-party VR apps distinguishes this case from other
 12 potential competition cases where potential entrants are typically incentivized to enter the relevant
 13 market because they are not capturing any of the neighboring market’s growth or profitability.
 14 *See, e.g., Black & Decker*, 430 F. Supp. at 755 (electric saw manufacturer entering the gasoline-
 15 powered chain saw market); *Phillips Petroleum*, 367 F. Supp. at 1245 (non-California oil
 16 company entering the California market for gasoline sales); *Yamaha Motors*, 657 F.2d at 974
 17 (Japanese motor company entering the U.S. outboard motor market). The Court accordingly does
 18 not find that these specific features of the VR dedicated fitness app market increase the probability
 19 that Meta would enter the market *de novo*, because Meta would enjoy those incentives even if it
 20 remained outside the relevant market and provided funding or technical support for in-market VR
 21 fitness app developers, as it already does.¹² *See supra* ¶ 7.

22 Hardware Integration. Apart from the incentives arising from the VR fitness market itself,
 23 the evidence also reflects one other incentive that arises from Meta’s direct participation in the
 24 relevant market. Specifically, entering the VR dedicated fitness app market with its own app
 25

26 ¹² To be sure, there is incentive for any company to enter a market that has stable consumers and is
 27 experiencing high growth, and the Court considers these incentives in assessing reasonable
 28 probability of Meta’s entry. However, those incentives are of a different type and on a different
 scale from Meta’s interest in VR dedicated fitness apps as a VR platform developer.

1 would facilitate Meta’s subsequent development of fitness-related VR hardware. This is an
 2 incentive to “first-party” entry that is acknowledge across multiple instances of internal
 3 contemporaneous correspondence at Meta. *See, e.g.*, PX0127, at 7 [REDACTED]
 4 [REDACTED]
 5 [REDACTED], Mar. 10, 2021; PX0146, at 10 (“[First-party] will allow us
 6 to test and iterate tools in our Fitness platform that we can then surface to other 3P”), June 18,
 7 2021; PX0487, at 5 (“We believe that increasing [headcount] for 1P investment (Option 3) is
 8 worth the tradeoffs in order to: 1. Develop a cohesive fitness ecosystem faster by enabling
 9 developers and building platform features.”), May 14, 2021. That said, the evidence also suggests
 10 that *de novo* entry is not strictly necessary to develop fitness hardware, *see* FTC’s Findings ¶ 185
 11 (indicating that Meta has also already produced “wipeable interface, wrist straps, and adjustable
 12 knuckle straps”), though independent entry into the market could streamline that development.

13 Profitability. Finally, there is some evidence of the relevant market’s profitability and that
 14 it [REDACTED] PX0386, at 12. The profitability of the relevant market is
 15 unsurprisingly a relevant incentive that many courts consider. *See, e.g., Phillips Petroleum*, 367 F.
 16 Supp. at 1245; *Black & Decker*, 430 F. Supp. at 755. While this factor is often quite salient in
 17 other potential competition cases, it is somewhat muted here, [REDACTED]
 18 [REDACTED]. PX0062 (“Milk Dep.”) 19:8–12. Of course, a market’s current profitability does not
 19 reflect its future profitability, especially if that market is exhibiting rapid growth as the VR
 20 dedicated fitness app market does here. Nonetheless, the fact that [REDACTED]
 21 [REDACTED] would indicate that the profitability of the relevant market
 22 warrants less consideration than it otherwise would.¹³

23 * * *

24
 25 ¹³ As discussed in the “Users and Growth” analysis above, the record reflects that Meta’s interest
 26 in the VR dedicated fitness market stems from the market’s potential contribution to broader VR
 27 adoption and corresponding headset sales. The Court recognizes that a thriving VR fitness market
 28 may contribute to Meta’s future profitability in headset sales. But that potential profitability in a
 different market is both too divorced from the likelihood of Meta’s *de novo* entry in the relevant
 market, and too speculative to evaluate under this factor.

1 Having reviewed and considered the objective evidence of Meta’s capabilities and
2 incentives, the Court is not persuaded that this evidence establishes that it was “reasonably
3 probable” Meta would enter the relevant market. Meta’s undisputed financial resources and
4 engineering manpower are counterbalanced by its necessary reliance on external fitness companies
5 or experts to provide the actual workout content and a production studio for filming and post-
6 production. Furthermore, the record is inconclusive as to Meta’s incentives to enter the relevant
7 market. There are certainly some incentives for Meta to enter the market *de novo*, such as a
8 deeper integration between the VR fitness hardware and software. However, it is not clear that
9 Meta’s readily apparent excitement about fitness as a core VR use case would necessarily translate
10 to an intent to build its own dedicated fitness app market if it could enter by acquisition.

11 On balance, the objective evidence does not so “strongly point to the feasibility of entry *de*
12 *novo*” that the Court should decline to consider subjective evidence of intent. *Falstaff Brewing*,
13 410 U.S. at 570.

14 3. Subjective Evidence

15 The Court first notes that it will accord little weight to subjective evidence and statements
16 provided by Meta employees during the course of this litigation. Although they are relevant,
17 entitled to some weight, and no doubt offered by persons of character, the bias affiliated with such
18 *ex post facto* testimony is widely recognized and unavoidable. *See, e.g., Falstaff Brewing*, 410
19 U.S. at 565, 570 (Marshall, J., concurring). In reviewing the subjective evidence in the record, the
20 Court will refer primarily to contemporaneous statements made by Meta employees.

21 The record reveals certain documents created contemporaneously by Meta employees that
22 appear to set forth Meta’s overall third-party VR investment strategy, along with individualized
23 analyses of various VR fitness investment options. PX0492 (“Quick Fitness / M&A Thoughts”),
24 Mar. 9, 2021; PX0127 (“VR Fitness Content investment thesis v2”), Mar. 10, 2021; PX0146 (“FB
25 Inc Fitness Strategy Working Draft”), June 18, 2021. The FTC has represented that these
26 documents were sponsored by Meta employees: Rade Stojavljevic, who oversaw all of Meta’s
27 first-party VR gaming studios (Stojavljevic Hr’g Tr. 69:18–24); Anand Dass, Meta’s director of

1 non-gaming VR content (*id.* 138:11–18); and Jane Chiao, a business-side employee who reported
 2 directly to Mark Rabkin, the head of VR technology at Meta (*id.* 140:23–141:1, Rabkin Hr’g Tr.
 3 800:7–11). Furthermore, exhibit PX0127 was a “pre-read” circulated in advance of a meeting
 4 with Mark Rabkin, *see* Stojisavljevic Hr’g Tr. 149:16–151:12, who would have been one of the
 5 decisionmakers needed to sign off on any significant VR fitness investment. *Id.* 189:24–190:12.
 6 These are not “memoranda of lower echelon [] employees.” *Siemens*, 621 F.2d at 508; *see* also
 7 *Atl. Richfield*, 549 F.2d at 297 n.9. Accordingly, the Court finds that the statements in these
 8 documents reflect the thoughts and impressions of relatively significant stakeholders, as the
 9 authors were generally one or two people away from the final decisionmaker.

10 The evidence contained in these strategy documents is consistent—Meta’s subjective
 11 motivations to enter the relevant market were primarily to (1) better develop VR fitness hardware
 12 or (2) ensure the continued existence of a high-quality VR fitness app in the market. The Court
 13 notes that these incentives would apply to both entry by acquisition and entry *de novo*, though
 14 perhaps not with equal force.

15 First, this subjective evidence corroborates the objective evidence that Meta primarily
 16 wanted to be a first-party firm in the VR dedicated fitness market so it could improve its VR
 17 fitness hardware (*e.g.*, headsets, heart monitor, wrist straps). *See* PX0492, at 2 (“Deep integration
 18 with hardware and software to create best in class experience that other devs can follow”);
 19 PX0127, at 7 [REDACTED]
 20 [REDACTED]
 21 [REDACTED]); PX0146 (“1P content is not a goal in itself – *it is only in the service of*
 22 *broader platform objectives* (*e.g.*, help accelerate progress of market phases).”) (emphasis added).
 23 The importance of this incentive is supported by internal Meta communications. *See* PX0179, at 2
 24 (noting that “strategic rationale already exists” to pursue VR fitness, which was to “[c]reate option
 25 value for [Meta’s device], software platform and hand tracking”), Mar. 11, 2021.

26 Second, the evidence also indicates that Meta would want to enter the VR dedicated fitness
 27 app market if the availability of VR fitness apps was at risk of becoming constrained and,

1 therefore, Meta could ensure that at least one high-quality VR fitness app remained in the market.
 2 Specifically, as early as March 2021, Meta employees were expecting Apple to “lock in” VR
 3 fitness content to be exclusive with Apple’s VR hardware. *See* PX0492, at 2 [REDACTED]
 4 [REDACTED] Mar. 9, 2021;
 5 PX0127, at 6 [REDACTED]
 6 [REDACTED]
 7 [REDACTED], Mar. 10, 2021.
 8 This incentive was also corroborated by contemporaneous communications. DX1012 , at 1 [REDACTED]
 9 [REDACTED]
 10 [REDACTED]
 11 [REDACTED]
 12 [REDACTED], May 26, 2021. The
 13 evidence also suggests that this incentive was the primary animating factor that ultimately
 14 compelled Meta to pursue Within as an acquisition. *See, e.g.*, PX0117 [REDACTED]
 15 [REDACTED].

16 Meta’s prior ventures into other VR app markets also do not support a subjective intention
 17 or proclivity to build its own apps as opposed to an acquisition. Courts have considered a
 18 potential entrant’s history of acquisitions and expansions in determining its likelihood of *de novo*
 19 entry. *See Black & Decker*, 430 F. Supp. at 756 (potential entrant had previously “diversified
 20 almost exclusively through internal expansion [and] had a definite, if unwritten, policy known to
 21 its employees of discouraging growth by acquisition”); *Phillips Petroleum*, 367 F. Supp. at 1240
 22 (“At no time prior to the [] acquisition did [the potential entrant] ever enter a new marketing area
 23 by acquiring a major company in that market.”). The evidence indicates that Meta has tended to
 24 build its own VR app where the experience did not call for specialized or substantive content, *e.g.*,
 25 Horizon Worlds (a world-building app where other users can create worlds in VR), Horizon
 26 Workrooms (a productivity app), Horizon Venues (a live-events app), Horizon Home (social
 27 networking app). Meta’s Answer and Affirmative Defenses ¶ 35; *see also* PX0056 (“Carmack

1 Dep.”) 101:15–23 (indicating Meta does not have “anything internally developed that was a hit
2 outside of our browser application”). Meanwhile, Meta has acquired other VR developers where
3 the experience requires content creation from the developer, such as VR video games, as opposed
4 to an app that hosts content created by others. Stojavljevic Hr’g Tr. 87:5–88:2. With respect to
5 fitness, the Court finds that VR dedicated fitness is more akin to a gaming app—where the
6 emphasis is on the content created or provided by the developer—than a browser or world-
7 building app, where the value is derived from the users’ own creativity rather than the developers’.
8 Accordingly, based on Meta’s past entries into VR app markets, the evidence would suggest an
9 interest in entry by acquisition instead of entry *de novo*.

10 But even more pertinent than the record of Meta’s past entries into VR app markets is the
11 evidence that Meta had consciously considered and appeared doubtful of the proposition to build
12 its own independent VR fitness app. The pre-read strategy document prepared for Mark Rabkin’s
13 attention contains a separate section that “[i]t will be hard to build Fitness from scratch.” PX0127,
14 at 7. Specifically, a VR fitness app would require Meta to [REDACTED]

15 [REDACTED]
16 [REDACTED] *Id.* The
17 document also recognized that Meta would have to “build new kinds of expertise at the
18 intersection of software, instructor-led fitness, music, media.” *Id.* The decision not to build
19 Meta’s own VR fitness app is corroborated by the lack of any other contemporaneous discussion
20 on the topic. The record does, however, indicate that Meta attempted to gauge whether it could
21 expand Beat Saber together with a fitness partner, a prospect the Court delves into further below.

22 In sum, the subjective evidence indicates that Meta was subjectively interested in entering
23 the VR dedicated fitness app market itself, either for hardware development or defensive market
24 purposes. However, the Court again notes that these incentives would support both market entry
25 by acquisition and *de novo*, but the Court’s inquiry is only concerned with the feasibility of *de*
26 *novo* entry. For instance, even though Meta’s concern about [REDACTED]

27 [REDACTED] was an incentive to acquire Within, that incentive does not apply with equal force

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[REDACTED]

[REDACTED] PX0127, at 1. And, as the Court elaborates below, the evidence shows that all these factors—Meta’s capabilities and incentives, both objective and subjective—did not result in Meta ever seriously contemplating a *de novo* entry, *i.e.*, building its own VR fitness app.

4. Identified Means of Entry

Up to this point, the Court has only addressed Meta’s capabilities, incentives, and intent to enter the VR dedicated fitness app market in the abstract. However, an assessment of the probability and feasibility of a hypothetical *de novo* entry would not be complete without addressing the *actual* means of entry that Meta considered. *See Black & Decker*, 430 F. Supp. at 757 (“Three avenues of entry into the gas lawn mower field were explored. . . .”); *Siemens*, 621 F.2d at 502–03 (summarizing multiple possibilities that other acquiring company had considered); *Phillips Petroleum*, 367 F. Supp. at 1243–44 (same).

Nevertheless, the FTC has implied that the Court may infer that Meta would have entered the market *de novo*—irrespective of its actual plans for entry—using “available feasible means” unbeknownst to the parties or the Court. *See FTC Closing Hr’g Tr.* 1494:16–18 (“We don’t have to show that Meta actually had a subjective intention to enter the market.”). To the extent the FTC implies that—based solely on the objective evidence of Meta’s resources and its excitement for VR fitness—it would have inevitably found and implemented some unspecified means to enter the market, the Court finds such a theory to be impermissibly speculative.

The FTC made a similar argument in *BOC International*, where it argued that “[s]imply because no entry had been effectuated at the time the [acquisition] presented itself did not mean that BOC would not have *eventually realized* its ‘long-term objectives’ of entering the [relevant] market by growth rather than by this major acquisition.” *BOC Int’l, Ltd. v. FTC*, 557 F.2d 24, 29 (2d Cir. 1977) (emphasis added). The Second Circuit rejected this “eventual entry” theory as “uncabined speculation,” holding that “it seems necessary under Section 7 that the finding of probable entry at least contain some reasonable temporal estimate related to the near future.” *Id.* The FTC recently reaffirmed this holding in *Altria Group, Inc.*, 2022 WL 622476, at *70

1 (“Complaint Counsel is arguing that due to Altria’s resources as a large company, and economic
2 incentives to participate in the e-cigarette market, Altria would have eventually had a product
3 competing in that market. *This is precisely the position rejected by the court in BOC.*”) (emphasis
4 added). Additionally, insofar as the FTC implies Meta could overcome its lack of fitness
5 experience and content creation by hiring experts or partnering with a fitness brand, the suggestion
6 reflects “the kind of unsupported speculation” rejected in *Tenneco*. 689 F.2d at 354 (rejecting the
7 FTC’s “conclusion that [potential entrant] would have entered the market de novo with the aid of a
8 license” for the necessary technology).

9 The Court here does not hold that every case of actual potential competition will require
10 consideration of a potential entrant’s actual and subjective plans for entry. *See Falstaff Brewing*,
11 410 U.S. at 565 (“We have certainly never suggested that subjective evidence of likely future
12 entry is required to make out a § 7 case.”) (Marshall, J., concurring). Nor does the Court suggest
13 that a particular entry strategy can only be “reasonably probable” and “feasible” if it has reached a
14 certain inflection point in the firm’s decision-making process. Such a conclusion would
15 incentivize corporate gamesmanship and reward decisionmakers for reaching merger decisions
16 hastily without exploring non-merger alternatives. *See generally id.* at 563–71 (Marshall, J.,
17 concurring). However, where the objective evidence is “weak or inconclusive” and does not
18 “strongly point[] to the feasibility of entry de novo,” *id.* at 570, it is incumbent on the Court to
19 consider the potential entrant’s actual plans of entry for the purposes of ensuring that Section 7
20 enforcement does not veer into the realm of ephemeral possibilities. As applied here, the Court
21 holds that the FTC may not rest solely on evidence of Meta’s considerable resources and the
22 company’s clear zeal for the VR dedicated fitness app market as a whole; the evidence must show
23 that Meta had *some* feasible and reasonably probable path to *de novo* entry.

24 Turning then to the evidence, the record indicates that Meta would only have entered by
25 acquisition or a Beat Saber collaboration with a fitness content creator; the Court is unaware of
26 any evidence that Meta considered building a VR fitness app on its own. In the strategy document
27 that was prepared for the meeting with Mark Rabkin, Meta personnel had outlined and analyzed

1 five options for investing in VR fitness: (1) acquire Within and Supernatural; (2) acquire [REDACTED];
 2 (3) expand Beat Saber into deliberate fitness, likely by partnering with Peloton; (4) increase
 3 funding for development of third-party VR fitness apps; and (5) do nothing and maintain the status
 4 quo. PX0127, at 2–4. The record reflects that, although Meta initially pursued the first three
 5 options in parallel, the frontrunner was the [REDACTED] acquisition until approximately June 2021 when
 6 Meta pivoted to acquire Within. *See, e.g.*, PX0179, at 1–2 (indicating that action items included
 7 pursuing due diligence for both Supernatural and [REDACTED] and having Stojavljevic “present a
 8 proposal to Rabkin on expanding Beat Saber to deliberate fitness”), Mar. 11, 2021; PX0284, at 1
 9 (drafting email to Michael Verdu summarizing the “pros/cons of [REDACTED] vs. Supernatural”), Mar.
 10 18, 2021; DX1012, at 1, 3 (“[Zuckerberg] asked if we were engaged with [Within]. . . . [Bosworth]
 11 responded that our focus has been on [REDACTED].”), May 26, 2021. Notably, even though Meta
 12 personnel had considered the option to increase third-party funding without entering the market
 13 and an option to do nothing as comparison, there was never an option for Meta to build its own
 14 VR dedicated fitness app to enter the market *de novo*.

15 Given the degree of analysis evident from these strategy documents, the Court finds that
 16 Meta had only considered the acquisition of Within, the acquisition of [REDACTED], and the partnership
 17 of Beat Saber with Peloton as feasible means to enter the relevant market. These three options,
 18 therefore, comprise the universe of “available feasible means” that the Court will consider for the
 19 purposes of the FTC’s actual potential competition claim.

20 **a. Entry by Acquisition**

21 Meta’s first two means of entry into the relevant market were both entries by acquisitions,
 22 either [REDACTED]. The evidentiary record indicates that these two options were both
 23 among the earliest proposals presented to Mark Zuckerberg, as well as the last two considered
 24 before Meta decided to acquire Within. *See, e.g., supra* Section I.D.

25 The evidence supports a finding that, but for its pursuit of Within as an acquisition, there
 26 was a reasonably probability that [REDACTED]

27 [REDACTED] However, the inquiry before the Court is not whether it was reasonably probable that Meta

1 [REDACTED] The FTC has argued almost exclusively that Meta’s “available feasible
 2 means” of entering the relevant market is by *de novo* entry, not acquisition. The FTC also does
 3 not take the position [REDACTED] that could have also
 4 conceivably had procompetitive effects. *See, e.g.*, Mot. 21 (noting that Meta’s entry into the
 5 market would have “introduce[ed] a strong, well-established new rival to Supernatural and
 6 FitXR”); *see also Marine Bancorporation*, 418 U.S. at 625 (defining a toehold acquisition as a
 7 “small existing entrant”).

8 Accordingly, the Court does not consider the “reasonable probability” that Meta could
 9 have entered the VR dedicated fitness market [REDACTED] as an
 10 “available feasible means” for the purposes of the actual potential competition analysis.

11 **b. Entry by Beat Saber–Peloton Partnership**

12 This brings us to the final means—and the FTC’s main theory—by which Meta could have
 13 entered the VR dedicated fitness market: expanding its existing rhythm game app Beat Saber into
 14 dedicated fitness and partnering with a fitness brand. The FTC claims that Meta scrapped this
 15 Beat Saber proposal once it learned that Within was at risk of being acquired by Apple. Mot. 10,
 16 20–21. However, this theory is neither supported by the contemporaneous remarks regarding the
 17 Beat Saber proposal nor the timing of the subsequent investigation into this proposal.

18 First, the evidentiary record is unclear as to what exactly the widely referenced Beat
 19 Saber–Peloton proposal would even look like. On some occasions, Stojsavljevic—the proposal’s
 20 primary advocate—refers to it as a “brand licensing w/ Peloton” or a “co-branding . . . Peloton
 21 mode inside Beat Saber.” PX0144, at 1, Mar. 8, 2021; PX0407, at 1, Mar. 15, 2021. On other
 22 occasions, Stojsavljevic considers whether the proposal would be a separate Quest Store app.
 23 PX0407, at 2. Michael Verdu—another proponent of expanding Beat Saber into fitness—also
 24 recalled that the proposal never reached a point of “understanding what that partnership would
 25 look like.” Verdu Dep. 201:14–23 (“[I]s it a Peloton-branded headset? Is it Peloton-branded
 26 content inside of our headset? Like we didn’t even get to the point where we were exploring at
 27 that level of detail.”). This uncertainty is consistent with the March 2021 “Beat Saber x Peloton

1 Opportunity Identification” presentation that [REDACTED] prepared at Stojsavljevic’s request,
 2 which indicated that part of [REDACTED] task would be to define the partnership opportunity and
 3 determine how to present the proposal to Peloton. PX0121, at 5–6, Mar. 25, 2021. Ultimately,
 4 Stojsavljevic did not even engage [REDACTED] to proceed with her proposed research into the Beat
 5 Saber proposal. PX0052 (“Stojsavljevic Dep.”) 219:23–220:1.

6 Second, the Beat Saber–Peloton proposal did not enjoy uniform or even widespread
 7 support among the Meta personnel who were researching VR fitness opportunities. *See* PX341, at
 8 2 (“Jane and Anand were arguing with me [Stojsavljevic] when I was proposing Beat Saber x
 9 Peloton and thought we should buy [REDACTED] or Supernatural instead.”), June 11, 2021. Particularly,
 10 Jane Chiao had consistently and contemporaneously expressed doubts regarding the feasibility of
 11 repositioning Beat Saber to fitness. *See* PX0492, at 1, 7 (“Jane’s quick thoughts” included a
 12 section titled “Why not Beat Saber?” setting forth reasons against pivoting Beat Saber to fitness),
 13 Mar. 9, 2021. In one exchange, Chiao commented that [REDACTED]
 14 [REDACTED]
 15 [REDACTED].” PX0251, at 2,
 16 Mar. 4, 2021. Chiao’s opinion was informed by the previous difficulties she had in attempting to
 17 reposition Meta’s social functions for other uses. *Id.* at 2–3 ([REDACTED]
 18 [REDACTED]).

19 Third, the timeline and dearth of contemporaneous internal discussions on the Beat
 20 Games–Peloton proposal is inconsistent with the FTC’s narrative that the Within acquisition
 21 derailed an otherwise full-speed effort to explore the Beat Games proposal. *See generally* DDX07
 22 (Defendants’ timeline demonstrative), at 31. In short, the idea was raised and endorsed by
 23 Stojsavljevic on March 11, 2021 (PX0179); he solicited feedback from his peers a few days later
 24 (PX0407); and on March 25, 2021, he received a quote for a contractor to look into the proposal,
 25 but did not proceed with it (PX0121). After this initial scramble, the record reflects no further
 26 discussion about expanding Beat Saber into fitness before June 2021, when Meta began pursuing
 27 Within as an acquisition. Although the FTC argues that there is no direct evidence that Meta had

1 deliberately dropped the Beat Saber proposal, the absence of active discussions could just as
2 reasonably—and the Court finds that it does—support Meta’s explanation that the Beat Saber
3 proposal had lost momentum after March 2021. The proposal’s main driver, Stojasavljevic,
4 testified that he had already “slowed down before [Meta’s decision to pursue Within],” because he
5 was busy with another Meta acquisition. Stojasavljevic Hr’g Tr. 165:12–17. Although subjective
6 corporate testimony is generally deemed self-serving and entitled to low weight, Stojasavljevic’s
7 lack of bandwidth is corroborated by his contemporaneous decision to outsource the research for
8 the Beat Games proposal. *See* PX0121, at 1; *see also* Stojasavljevic Hr’g Tr. 163:25–165:11.

9 Moreover, when viewed alongside Meta’s history with Beat Saber, these two months of
10 inactivity between March and June 2021 appear to have been the norm rather than the exception.
11 Although Meta employees like Verdu were excited about Beat Saber’s potential as a vector into
12 fitness, Meta has never been able to execute on that excitement in any of the years since they
13 acquired Beat Saber. Verdu Dep. 178:12–20 (“[I]t was the perpetual white whale quest to get . . .
14 Beat Games to build a fitness version of Beat Saber, which was like pushing on a string. We tried
15 and tried and tried, and they never picked it up.”); *see* PX0123 (“[REDACTED] was on the goal
16 list for the [beat] saber acquisition. . . . But that goal was never followed up on.”), Sept. 15, 2021.

17 Finally, the FTC cites two instances of contemporaneous Meta communications that
18 suggest the Beat Saber proposal had not died on the vine when Meta pivoted to acquiring Within.
19 *See* FTC Closing Hr’g Tr. 1495:10–24. The first is Verdu’s comment on June 20, 2021, that Meta
20 was “in the *midst of a strategy exercise to decide between our alternatives* when Supernatural
21 became in play (supposedly pursued by Apple), which accelerated everything.” PX0117, June 10,
22 2021 (emphasis added). The FTC asserts that the referenced “alternatives” included the Beat
23 Saber–Peloton proposal; however, this theory is inconsistent with the fact that there had been no
24 internal discussion of the proposal in the preceding two months. The more likely interpretation is
25 that “alternatives” referred to [REDACTED]

26 [REDACTED] *See* PX0253, at 1.

27 The second communication arose in the context of [REDACTED]

1 requested a sale price of [REDACTED]. PX0123, at 2, Sept. 15, 2021. In discussing alternatives to
2 the Within acquisition, Jason Rubin suggested that another [REDACTED]
3 [REDACTED] *Id.* He
4 also suggested, “We might be able to buy [REDACTED], rebrand and redesign to Beat aesthetics.” *Id.* In
5 assessing the weight of these statements, the Court makes a few contextual observations. At the
6 time Rubin made his comments, he had only been in his role for about six weeks; Verdu (an
7 employee with extensive knowledge of Meta’s history with VR fitness) previously held the role.
8 PX0066 (“Rubin Dep.”) 28:8–15 (“On August 1st, I took or was handed the role that I have right
9 now . . . and inherited [the Meta–Within] acquisition in full swing.”). Rubin also testified that,
10 before switching roles, he “was not aware of anything having to do with fitness at all in the VR
11 world” and had no knowledge of “how the company had come to its decision making to acquire
12 [Within].” *Id.* 126:9–127:11. Perhaps on a record with more corroborating evidence, Rubin’s
13 remarks may warrant more substantial weight towards the FTC’s theory that the Beat Saber fitness
14 proposal remained a live proposition. However, given that Ruben’s remarks appeared to have
15 been made off the cuff, are inconsistent with the overall weight of the evidence, and were made at
16 a time when he was likely still unfamiliar with VR fitness and Meta’s history, the Court is
17 disinclined to accord any significant weight to Rubin’s comments.

18 For all these reasons, the Court finds that it was not “reasonably probable” that Meta
19 would have repositioned their top-selling VR app, Beat Saber, into a dedicated fitness app, even
20 assuming that it could have identified a partner willing to provide VR fitness content.

21 * * *

22 After reviewing the evidentiary record and the parties’ arguments, the Court concludes that
23 it is not “reasonably probable” that Meta would enter the market for VR dedicated fitness apps if it
24 could not consummate the Acquisition. Though Meta boasts considerable financial and VR
25 engineering resources, it did not possess the capabilities unique to VR dedicated fitness apps,
26 specifically fitness content creation and studio production facilities. As a VR platform developer,
27 Meta can enjoy many of the promising benefits of VR fitness growth without itself intervening in

1 the VR fitness app market. Finally, the proposal for Meta to expand Beat Saber into fitness was
 2 not “reasonably probable” for a whole host of reasons, in addition to the aforementioned obstacles
 3 to Meta’s *de novo* entry.

4 Accordingly, the Court finds that Meta did not have the “available feasible means” to enter
 5 the relevant market other than by acquisition. Because the FTC has not met its burden on this
 6 element, the Court does not proceed to the issue of whether Meta’s *de novo* entry was substantially
 7 likely to deconcentrate or result in other procompetitive effects in the relevant market.

8 In so finding, the Court concludes that the FTC has failed to establish a likelihood that it
 9 would ultimately succeed on the merits as to its Section 7 claim based on the actual potential
 10 competition theory.

11 **E. Perceived Potential Competition**

12 In addition to its claim that the Acquisition would lessen competition pursuant to the actual
 13 potential competition theory, the FTC also claims that the Acquisition violates Section 7 under the
 14 perceived potential competition theory. FAC ¶¶ 97–102. Under this theory, the FTC argues that
 15 the Acquisition would eliminate the competitive influence that Meta exerts on firms within the
 16 relevant market by virtue of its presence on the fringes of the market. *See, e.g., United States v.*
 17 *Falstaff Brewing Corp.*, 410 U.S. 526, 559–60 (1973).

18 To prevail on a claim that the Acquisition would have eliminate perceived potential
 19 competition, the FTC must establish—in addition to showing a highly concentrated market, *see*
 20 Section III.C—the following: (1) Meta possessed the “characteristics, capabilities, and economic
 21 incentive to render it a perceived potential *de novo* entrant”; and (2) Meta’s “premerger presence
 22 on the fringe of the target market in fact tempered oligopolistic behavior on the part of existing
 23 participants in that market.” *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 625
 24 (1974). The same objective facts regarding Meta’s capability of entering the market under an
 25 actual potential competition theory are also “probative of violation of § 7 through loss of a
 26 procompetitive on-the-fringe influence.” *Falstaff Brewing*, 410 U.S. at 534 n.13; *see also Black &*
 27 *Decker*, 430 F. Supp. at 770. However, whereas a claim for actual potential competition may

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1 consider the potential entrant’s intent to enter the market, a perceived potential competition claim
2 ignores the potential entrant’s subjective intent to enter the market and instead focuses on the
3 subjective perceptions of the in-market firms. *See Falstaff Brewing*, 410 U.S. at 533–36.

4 **1. Potential Entrant Characteristics**

5 In evaluating the FTC’s perceived potential competition claim, the Court considers the
6 same objective evidence regarding Meta’s capabilities and incentives to enter the relevant market.
7 Unsurprisingly, and for the same reasons explained above, the objective evidence in the record is
8 insufficient to support a finding that it was “reasonably probable” Meta would enter the relevant
9 market for purposes of the perceived potential competition doctrine. *See supra*, Section III.D.2.

10 Nor does the subjective evidence of the in-market firms’ perceptions move the needle on
11 this point. Although the FTC produced some evidence that Within co-founders and employees
12 had expressed concern that Beat Saber or its fans could create a fitness version to compete with
13 Supernatural, these statements are mostly stale with some significantly preceding the relevant time
14 period. The FTC’s strongest evidence that [REDACTED]
15 were statements made [REDACTED]
16 before Supernatural even entered the VR market in April 2020. *See, e.g.*, PX0627, at 2

17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]

21 [REDACTED] The FTC has only produced one document that
22 post-dates Supernatural’s launch, which is a June 2020 “Supernatural Product Strategy”
23 presentation that noted [REDACTED]
24 [REDACTED] PX0615, at 8. However, even this document’s weight is undercut by the fact that it
25 was created nearly a year before Meta began pursuing Within as an acquisition target.¹⁴

26 _____
27 ¹⁴ The FTC also produces an April 2021 internal communication from *Meta*, where a Meta
28 employee remarked that Within “very much worry that [Meta] will create a fitness first app
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1 Furthermore, subsequent but still contemporaneous evidence indicated that Within
2 eventually came to [REDACTED]” DX1083, at
3 10, Sept. 22, 2020. In a September 2020 text conversation with a Within investor, Within’s co-
4 founder Chris Milk explained that [REDACTED]
5 [REDACTED] *Id.* at 7. In the same
6 conversation, Milk [REDACTED]
7 [REDACTED]
8 [REDACTED] *Id.* at 67–68.

9 In summary, the evidentiary record indicates that [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED] This finding, in addition to the overall absence of testimony from
13 other in-market firms, would suggest that the FTC has failed to demonstrate that it was
14 “reasonably probable” that Meta was perceived as a potential competitor into the relevant market.
15 However, even if the FTC had prevailed on this element, the Court is convinced that it did not
16 satisfy the second required showing for a perceived potential competition claim.

17 2. Tempering Effect

18 Under the second element of the perceived potential competition claim, the FTC must
19 establish that Meta’s “premerger presence on the fringe of the target market *in fact* tempered
20 oligopolistic behavior on the part of existing participants in that market.” *Marine Bancorporation*,
21 418 U.S. at 624–25 (emphasis added). In other words, the FTC must present evidence that it was
22 “reasonably probable” that Meta’s presence as a potential competitor had a direct effect on the
23 firms in the VR Dedicated Fitness market.

24 _____
25 internally that takes their market share.” PX0514, at 2, Apr. 23, 2021. The Court is doubtful of
26 the probative value of this hearsay statement, and the FTC has not produced any evidence to
27 corroborate this statement. FTC Closing Hr’g Tr. 1498:2–9 (“[W]e heard from Ms. Brown, and
28 you may recall that she did not remember much, if anything at all, about this document. . . . It’s up
to this court to judge her credibility on that score. But she did say that she was being truthful when
she wrote this.”).

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1 In setting forth this standard, the Court rejects the FTC’s suggestion that it need only
 2 provide “[p]robabilistic proof of ‘likely influence’ on existing competitors.” Mot. 21. This
 3 interpretation arises from the language used by the Supreme Court in a footnote from *Falstaff*
 4 *Brewing*, specifically “[t]he Government did not produce *direct evidence* of how members of the
 5 [relevant] market reacted to potential competition from [the potential entrant], but *circumstantial*
 6 *evidence* is the lifeblood of antitrust law.” 410 U.S. at 534 n.13 (emphasis added). The Court
 7 reads this language to mean the FTC need not provide *direct evidence* of Within adopting its
 8 conduct to account for Meta’s presence (e.g., a hypothetical internal email at Within expressly
 9 communicating fear of Meta’s imminent entry and taking actions in anticipation). Direct
 10 evidence, however, is distinguishable from evidence of a *direct effect* experienced within the
 11 relevant market (e.g., circumstantial evidence that Within reduced prices shortly after Meta’s
 12 hypothetical public announcement that it was looking into the VR Dedicated Fitness market).
 13 This interpretation is supported by the Supreme Court’s statement of the law in *Marine*
 14 *Bancorporation*, 418 U.S. at 624–25 (requiring “presence . . . in fact tempered oligopolistic
 15 behavior”) and the Second Circuit’s interpretation in *Tenneco, Inc. v. FTC*, 689 F.2d 346, at 358
 16 (“The Commission is correct that it need not produce direct evidence that [acquired company]
 17 altered its actions in response to a perception of [potential entrant] ‘in the wings.’ However, it
 18 must produce at least circumstantial evidence that [potential entrant’s] presence probably *directly*
 19 *affected* competitive activity in the market.”) (emphasis added). Accordingly, the FTC must
 20 produce *some* evidence—direct or circumstantial—that Meta’s presence had a direct effect on the
 21 firms in the relevant market.

22 Under this standard, the FTC’s evidence on this element is insufficient. The only evidence
 23 that suggests any kind of effect in the relevant market is that Within cited, as reasons not to reduce
 24 headcount at Within shortly before launching Supernatural, [REDACTED]

25 [REDACTED]
 26 [REDACTED] PX0620, at 36, Mar. 8, 2020. As noted
 27 above, Within and Supernatural had not even entered the relevant market at the time of this

1 presentation. Consequently, this cannot be evidence of a direct effect within the VR dedicated
 2 fitness app market; rather, they are the preemptive considerations of a firm contemplating entry
 3 into the market. Moreover, the evidence indicates that Within had [REDACTED]
 4 [REDACTED]. *See supra*
 5 Section III.E.1. Other than this presentation, the FTC suggests that [REDACTED]
 6 [REDACTED]
 7 [REDACTED]” PX0621, at 2, Dec. 8, 2020. Although
 8 this is circumstantial evidence that Within was concerned about hypothetical potential entrants,
 9 absent further evidence, this email is no basis to infer the critical nexus, *i.e.*, that Meta was one
 10 such potential entrant.

11 The Court recognizes that its interpretation of the “effect” requirement sides with
 12 Defendants’ position set forth in their Motion to Dismiss. ECF No. 108, at 15–16; ECF No. 162,
 13 at 10–12. Although the Court ultimately determines that the FTC’s evidence has not established
 14 that Meta’s presence had a direct effect on Within’s behavior, it finds that the FTC’s *pleadings* are
 15 sufficient. The FTC had alleged that Within was “concerned about making any moves that would
 16 hurt its ability to compete against Meta as a potential entrant” and provided an example. FAC ¶
 17 101. At the pleadings stage, this satisfies their burden. Accordingly, the Court DENIES
 18 Defendants’ motion to dismiss the perceived potential competition claim.

19 In summary, the Court finds that the objective evidence does not support a reasonable
 20 probability that firms in the relevant market perceived Meta as a potential entrant. Even if it did,
 21 the Court finds that there is no direct or circumstantial evidence to suggest that Meta’s presence
 22 did in fact temper oligopolistic behavior or result in any other procompetitive benefits.
 23 Accordingly, the FTC has not demonstrated a likelihood of ultimate success as to its Section 7
 24 claim arising from perceived potential competition.

25 **F. Balancing of Equities**

26 Because the FTC has not demonstrated a likelihood of ultimate success on the merits per
 27 the first § 13(b) element, the Court need not proceed to the balance the equities in the second

1 portion of the § 13(b) inquiry.

2 **IV. CONCLUSION**

3 Based on the foregoing reasons, the Court ORDERS as follows:

- 4 1. Defendants' Motion to Dismiss is DENIED;
- 5 2. Defendants' Motion to Strike is DENIED AS MOOT; and
- 6 3. Plaintiff's Motion for Preliminary Injunction is DENIED.

7

8 **IT IS SO ORDERED.**

9 Dated: January 31, 2023

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EDWARD J. DAVILA
United States District Judge

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