DECLARATION OF DOV ZIMRING

I, Dov Zimring, based on personal knowledge, information and belief, hereby make the following statement:

1. I am the director of product management for Stadia at Google. I have been in the tech industry for 25 years. I joined Google in 2010 and have been working on Stadia for the past 9 years. My current responsibilities include leading the shutdown of Google Stadia through January of 2023. Prior to working on Google Stadia, I was a product manager on the Google Fiber team.

Google Stadia Background.

2. In 2019, Google launched its cloud gaming service, Google Stadia (Stadia) in tandem with an in-house game development studio, Stadia Games and Entertainment (SG&E). Google's goal was to bring a high-quality video game experience to any device and to create original content for users. Stadia's ambitions aligned with Google's mission to make information universally accessible and useful—we believed cloud gaming could further democratize access, grow the marketplace, and enable new experiences. Google marketed Stadia as a console-less experience that allows instant access to games across laptops, desktops, TVs, tablets, and phones. As a cloud game streaming service, Stadia offered access to games run on Google's servers and streamed to customers' devices. ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ There are a number of factors that I believe contributed to Stadia's lack of success, a significant one being the cost and difficulty of securing content to offer to Stadia users.

3. From the time of its launch, Stadia consisted of two tiers. The first tier was a base service that distributed games with a publisher's preferred business model: transaction sale (e.g., FIFA for $69.99), publisher subscription (e.g., Ubisoft+ for $15 per month), or free-to-play (e.g., Destiny 2). Each of these options supported in-game purchase as well. The base service allowed users to play games without restrictions on how long they could play, placed no restriction on multiplayer services, and charged no incremental platform fees. The second tier, Stadia Pro, was a $9.99 per month subscription that granted additional features and content atop the base service. Stadia Pro subscribers enjoy gameplay with 5.1 surround-sound and up to 4K resolution (versus stereo audio and 1080p resolution in the base tier). Stadia Pro subscribers also have special access to a rotating collection of games: each month, additional games were made available to Stadia Pro subscribers, which they could claim and have access to for as long as they were a paid Stadia Pro subscriber. All Stadia customers, both base and Stadia Pro, were able to play free-to-play games, purchase games and make in-game purchases.

4. Google also marketed a Stadia controller similar to a PlayStation or Xbox controller. The Stadia controller was only required for gameplay with a Chromecast Ultra; gameplay on all other supported devices could be done with the Stadia controller or a third-party controller. The Stadia controller included several features that could enhance a player's gaming experience on any supported screen, including a button that allows users to capture images and videos of their game session.

5. Stadia's approach to gaming was device agnostic for consumers. Stadia was accessible on PCs via Chromium-based and Safari (for macOS) browsers. Stadia was also available on Android mobile devices via the Stadia mobile app, Google TV, compatible Android TV devices, Chromecast Ultra, and some other smart TVs and streaming devices. A version of the Stadia mobile app was also made available on iOS via the Apple App Store, but we were unable to offer gameplay within this app due to Apple's policy restrictions.

6. Stadia established pricing, positioning, and content acquisition goals based on extensive market research. We conducted consumer surveys, qualitative and quantitative segmentation, and conjoint analysis to determine offerings we believed would be optimal for users, publishers, and Google. The strategy of offering a free and paid tier, as well as the price for the paid tier (Stadia Pro), was determined through quantitative analysis primarily from our conjoint analysis. Among other things, this research established that the optimal catalog would need both a large number of games (breadth) and the latest and most popular games (depth) to attract users to the platform.

7. Stadia's vision was to enable revolutionary gaming experiences on any connected screen. To achieve this vision, we built a new game platform that provided consumers a safe and comprehensive experience with avatar, social, multiplayer, commerce and other platform features that compare closely to what is being offered on the highest performing consoles. We provided developers and publishers the tools and guidelines necessary to deliver consistent, high quality experiences to consumers. We envisioned numerous opportunities for cloud-native games that would not be possible with the constraints of traditional consoles or PCs. We showcased some of these technologies when we announced Stadia at the Game Developers Conference in March 2019. We established SG&E to lead the industry in developing these new gaming experiences.

8. When Stadia was selecting the technology stack, including graphics processing unit (GPU), operating system (OS), and graphics application programming interface (API), for the Stadia servers that would run games, we considered several alternatives. We faced a decision between, on the one hand, technologies that would provide the most flexibility and opportunity for us to realize our vision and, on the other hand, technologies with which third-party game developers were already familiar and for which they could more easily develop new games and port their existing catalog of games. We ultimately opted to use technologies, including the open-source Linux operating system and Vulkan

graphics API, that provide the greatest flexibility and opportunity for customization, as we believed this would enable the creation of new types of games, lead to the best end user experience on Stadia, and the best streaming quality. One negative consequence of this decision was that it increased the cost for external game studios to build games and port existing games to Stadia, despite Stadia's considerable investment to ease these costs through developer tooling, middleware, and personnel to directly support game studios in Stadia game development. An alternative that we considered to the Linux and Vulkan technology stack that would have reduced the costs for external game studios was enabling games to run on Windows and Microsoft's DirectX graphics library, but we ultimately determined that Windows licensing fees were cost prohibitive for the long term viability of the service and that use of Windows/DirectX would not allow for the customization needed to create the high-quality end user experience that Stadia envisioned.

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Competition with Cloud Gaming Services.

10. When Stadia launched, Stadia competed with legacy gaming platforms that were popular with gamers at the time, primarily Microsoft's Xbox platform and Sony's PlayStation platform, as well as PC game distributors like Steam and Epic Games Store. As cloud-based technology progressed over time, Stadia also faced strong competition from cloud-based services that, like Stadia, provided seamless access to games across devices, including Amazon's Luna, Nvidia GeForce NOW, Sony's PlayStation Plus Premium, and Microsoft's Xbox Cloud Gaming.

11. For Stadia to succeed, both consumers and publishers needed to find sufficient value in the Stadia platform. Stadia conducted user experience research on the reasons why gamers choose one platform over another. That research showed that the primary reasons why gamers choose a game platform are (1) content catalog (breadth and depth) and (2) network effects (where their friends play). This research also showed that the gamers who chose to play on Stadia valued convenience—the ability to quickly get into gameplay within seconds on any supported screen with no downloads or patches. Publishers, for their part, have to decide where to spend their limited development and marketing energy, and which platforms to favor to reach the broadest audience.

12. Stadia was the most advanced cloud gaming service and generally outperformed competing cloud gaming services in key metrics including video quality, smoothness of performance, overall performance, latency, and audio performance. For example, Stadia Pro offered a graphics resolution of up to 4K and 10-bit color (HDR), features not available on competing cloud gaming platforms. These features help developers bring

their most coveted games, often referred to as AAA games, that utilize high-end graphics and that require little or no lag for enjoyable gaming experiences. AAA games are comparable to Hollywood blockbusters with the biggest actors and directors.

13. Stadia vigorously competed with other gaming services and partnered with several publishers to bring their games to Stadia. For example, Stadia partnered with the video game publisher Electronic Arts to bring its popular franchises including *FIFA*, *Madden NFL*, and *Star Wars: Jedi Fallen Order* to Stadia. In addition, the video game developer and publisher Ubisoft was an early supporter of Stadia and was Stadia's most prolific publisher with over 30 games brought to the service.

14. However, Stadia never had access to the extensive library of games available on Xbox, PlayStation, and Steam. More importantly, these competing services offered a wider selection of AAA games than Stadia. Our internal research confirmed that players expect to have access to many of these games on their chosen platforms.

15. Google attempted to make it easier for video game developers to bring their games to Stadia. For example, Google created low-change porting, which is a tool kit for developers that includes: (a) partnerships with Unity and Epic Games (developers of two of the most popular game engines, software development programs that allow video game developers to create new games more quickly and easily) for their game engines to support Stadia, (b) the creation of libraries that auto-translate DirectX to Vulkan, and (c) cloud native play testing and quality assurance options. Google also helped video game developers by covering some or all of the costs of porting their games to Stadia, thereby investing a significant amount of capital to bring the popular games that players want to ██

of funding to subsidize developers' porting costs.

16. However, developers could bring their games to Windows-based cloud gaming platforms such as Amazon Luna and Nvidia GeForce NOW with far less investment than for Stadia. For example, in the case of GeForce NOW, the cost to developers was close to zero as GeForce NOW operates based on a virtual Windows PC running in the cloud. A developer need only authorize the game to be played using GeForce NOW using existing distribution channels like Steam and the Epic Games launcher. Luna also required less investment and resources by the developers than Stadia because Luna's servers run on Windows.

17. Historically, a majority of PC video games were designed for and developed to work on Windows and with its associated services like DirectX. Before Stadia entered the marketplace, video game developers typically did not need to budget for the time and cost of porting their titles to a non-Windows-based platform, unless they sought to launch their games on Sony or Nintendo consoles (which both have large installed user bases

that make such investment worthwhile). This default preference for developers to use Windows made it easier for cloud gaming services based on Windows to bring existing games to their services from a technical perspective even if it creates additional licensing costs. For these same reasons, developers are likely to develop future titles for Windows first, requiring those titles to undergo porting to non-Windows platforms as well.

Rising cost of game development led to the closure of Stadia's game development business.

18. An attractive catalog of AAA games and other high-quality content that gamers want to play was always a key component of Google's strategy for Stadia and was vital for Stadia's success. In fact, when Google tracked media coverage of Stadia, the most discussed feature was content. That is why Google sought to bring the latest and most popular games to Stadia over the past 3 years. In addition to paying for video game publishers to port their games over to Stadia and all the other work listed above, Google launched SG&E with the goal of creating exclusive original content, and hired executives like Jade Raymond, VP and leader of SG&E who was previously credited with creating studios for some of the world's leading publishers (Electronic Arts and Ubisoft) as well as leading successful AAA franchises (*Assassin's Creed* and *Watch Dogs*). Jade Raymond recruited an exceptional leadership team to scale SG&E. Shortly after inception, SG&E led the acquisition of one studio and the founding of two others. Shannon Studstill—former head of Sony's storied Santa Monica Studio who makes the successful AAA franchise *God of War*—was hired to lead one of these SG&E studios. SG&E succeeded in hiring some of the game industry's most respected talent across every discipline: artists, writers, producers, technologists, etc. As a result of this effort, SG&E made great progress toward developing and publishing original content for Stadia.

19. However, on February 1, 2021, Google announced the closure of SG&E. The decision to close Stadia's internal game studios after less than 14 months of operation was in large part a result of the increasing costs of creating best-in-class video games. These games require many years of development time, specialized expertise, and significant investment. This increase in costs was a significant factor in Google's decision to abandon its attempt to compete in the development of first party video games (games developed by SG&E) in a consolidating industry with vertically integrated platform operators like Microsoft that, in some cases, acquire multiple independent studios to support their existing blockbuster titles.

Lack of AAA content meant Stadia could no longer compete.

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critical mass that would incentivise the largest video game developers to invest the necessary resources to develop games that run on Stadia. For example, developers require

that a platform have a critical mass of users such that the forecasted revenue from game and in-game purchases could realistically exceed the total cost of bringing that game to the platform.

21. In February 2021, at the same time that Google decided to close SG&E, Google revised its business plan for Stadia in an attempt to keep the service in operation. In the face of Google's inability to create the blockbuster video games that gamers demand and the growing cost of securing AAA games on Stadia, Google lowered Stadia's subscriber ███████████████████████████████████████ showcase for Immersive Stream for Games. Immersive Stream for Games was a white-label service separate from Stadia that provided the innovative cloud gaming tech ███████████████████████████████████████ to use Stadia's existing catalog of games and a limited selection of new games to demonstrate the viability of Immersive Stream. Even with this drastic reduction in expectation and the scope of the service, Stadia was still unable to attract enough subscribers to maintain a viable business. Without any clear path to reaching a critical mass of subscribers, Google announced on September 29, 2022 that Stadia would shut down in January 2023.

22. Stadia's chief challenge in attracting a sustainable user base was always securing a sufficient catalog of AAA content. Stadia struggled to gain access to the AAA games that generate the long-term gamer and developer engagement necessary to make Stadia competitive. In order for a potential Stadia subscriber to justify investing in the ecosystem by purchasing games and subscribing, the subscriber needs to know that the games they want to play would be available on Stadia. To that end, Google's goal was always to have a wide catalog of third party games, including AAA games, available on Stadia.

23. While Stadia enjoyed success in supporting smaller developers' efforts to port their games to Stadia, we were unable to reach agreement with the developers of AAA games who complained about the cost of porting their games to work on Stadia given the lack of users on Stadia even with the subsidies that we provided. Developers who owned the most valuable video game content explained that their decision whether to port a game onto a new platform like Stadia was driven by the growth potential of their games on the emerging service. Stadia's lack of important AAA content created a self-sustaining cycle whereby players would not subscribe to Stadia because of the lack of AAA games, and in turn many AAA game developers would not develop games for Stadia due to its small user base.

24. For example, Google had regularly engaged in discussions with Activision to bring its titles to Stadia. The parties were unable to reach an agreement to bring Activision's games to Stadia because of Stadia's low subscriber count and challenges in aligning on

economic incentives for Activision. Still, Activision remained interested in the Stadia platform, and regularly requested updated subscriber figures. In contrast, our experience with Microsoft's 2021 acquisition of ZeniMax, parent of the iconic game studio Bethesda Softworks, shows that Activision under Microsoft's ownership very likely will be unwilling to bring its titles to competing game platforms, especially those competing with its leading cloud gaming and Windows platforms, making it more difficult for existing and new platforms to attract users and compete against Microsoft's services.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed on December 7, 2022 in the state of California.

Dov Zimring
Director, Product Management, Stadia