Cloudflare Workers for Gaming
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According to a 2019 Global Market Insights, Inc. report, cloud computing for gaming is a market experiencing explosive growth from $1 billion in 2018 to a projected $8 billion in 2025[1]. This market niche poses great potential for Cloudflare, though there are risks to be aware of as Cloudflare enters this market segment. Cloudflare Workers for Gaming can place itself in a strategic position by improving documentation and training for developers and entering new, emerging markets, such as augmented and virtual reality cloud computing. Additionally, Cloudflare can utilize and develop partnerships to ensure the success of Cloudflare Workers for Gaming, whilst implementing agile development processes to lead the cutting-edge of cloud computation.

As of January 2019, surveyed technical executives, managers, and practitioners of cloud technologies from around the world indicated that one of the biggest challenges of using cloud computing technology within their organizations is the lack of resources/expertise, of which 78% believed posed somewhat of a challenge or a significant challenge[2]. Cloudflare can utilize this market need to create documentation and tutorials for how to utilize the cloud infrastructure for developers looking to learn more and transition their products to the cloud. Creating more videos and technical tutorial documents to lower the barrier to entry into cloud computing and partnering with universities to offer and increase awareness to engineers entering the workforce of Cloudflare as a market leader for cloud gaming. By doing so, Cloudflare would be able to establish itself as a leader for transitioning game development companies into the cloud, in addition to marketing and familiarizing its products to potential consumers.

A heavily-growing market with potential for cloud computing in gaming is the AR/VR industry, with sales of virtual reality software, especially gaming, expected to increase from $3.1 billion to $6.4 billion by 2022, according to Statista estimates[3]. From preliminary research, there does not appear to be a market leader for cloud computing specializing in the AR/VR industry in general, let alone gaming. A key aspect of this market is that cloud computation would allow for increased adoption of VR devices, since VR is computationally intense allowing users with lower-end computers to obtain access. This unique positioning could allow for increased business partnerships between Cloudflare and AR/VR manufacturers. Cloudflare can also utilize its partnership with Baidu in Yunjiasu in order to provide cloud computing for gaming in China, a country which is expecting a compound annual growth rate of 20.2% from 2019 to 2025 for cloud gaming[4].

To improve the product quality before release Cloudflare should utilize a quick iterative process to develop and improve their cloud gaming services rapidly over time. One way is to create an

agile development platform, where features and prototypes are quickly developed and tested. Along with this, a fast and lean design thinking model prioritizes iterating while testing and receiving feedback. Finally, demoing and testing with users throughout various stages of development for feedback to create a user-centered product.

To measure the success, customer feedback is key, as well as key performance indicators, such as cloud utilization. For customer feedback, creating surveys to visualize the impact and main issues can create direction for the product, while one-on-one surveys can provide deep insight on how developers interact with the product, allowing Cloudflare access to valuable information on how to improve their product-market fit. Another metric is keeping track of growth and usage over time can create valuable insight on the success of the product over time. Finally, during an interview I scheduled with a developer in the cloud gaming industry, I've learned that cloud is heavily utilized for surges in load, user data, and data analysis, and that feature requests are common, so having a user-centered design would keep Cloudflare's offerings competitive. These metrics, particularly surge utilization, could also be an effective way to measure the value that Cloudflare provides.

Some risks of the gaming market for Cloudflare include market saturation, cloud and distribution platform models, and lack of significant shift into the cloud or switching to other cloud providers. Currently, the cloud gaming market in general is saturated with companies such as AWS, IBM, Google, and more. Another shift that's increasingly more common is the development of cloud and distribution platforms, such as Steam Cloud, Microsoft xCloud, or Google Stadia, which offer fully-featured cloud services within their distribution platforms. This seamless integration and partnership could likely prove to be a challenge for Cloudflare's cloud gaming platform. Additionally, in my interview, I was able to learn that transitioning to a new cloud provider would be financially expensive, time-consuming, and unnecessary. As such, Cloudflare's products would be best aimed at companies looking to shift into the cloud.

Cloudflare has a large potential to establish itself as a leader through improving access to resources, leveraging partnerships, entering emerging markets, and implementing agile development processes. Through prototyping before launching and scaling the ideas based on successes, Cloudflare is capable of entering a competitive market while minimizing risk.

[1]https://www.globenewswire.com/news-release/2019/07/01/1876481/0/en/Cloud-Gaming-Market-to-exceed-8bn-by-2025-Global-Market-Insights-Inc.html
[2]https://resources.flexera.com/web/pdf/RightScale-2019-State-of-the-Cloud-Report-from-Flexera.pdf
[3]https://www-statista-com.ezproxy.lib.calpoly.edu/statistics/550474/virtual-reality-software-market-size-worldwide/
[4]https://www.mordorintelligence.com/industry-reports/cloud-gaming-technology-in-china