

5G-POWERED GAMING — REDEMPTION FOR TELCOS

Telcos did not reap the complete benefits of the 4G era. Now, as the world is transitioning to 5G, they are desperately seeking a bigger slice of the potential financial benefits. Gaming can become a significant revenue stream for telcos through strong partnerships with cloud computing players and gaming companies.



Telecom carriers will invest \$144 billion annually until 2025 to build 5G networks, according to the GSM Association.¹ Recouping these investments may well be a challenge. These players need to avoid the recurrence of what happened during the 4G era — when tech companies generated the lion's share of value added income while telcos primarily collected network fees.

5G will be the key enabler of remote metaverse applications

As the metaverse ecosystem evolves, 5G will become a key enabler of low-latency connectivity that powers applications, including cloud-based gaming, workplace collaboration, and 3D entertainment. Of these, gaming is the most immediately monetizable application that can take telcos closer to lucrative businesses.

The power of gaming

The global video game market is estimated to grow at a 6.7% average annual rate to reach \$218.8 billion in 2024 from \$180.3 billion in 2021.² This includes consumer spending on physical and digital video games (for PCs, consoles, and mobile devices), in-game spending, and online gaming subscriptions (e.g., Xbox Game Pass), but excludes sales of hardware (e.g., consoles), ad spending around games, business-to-business services, and online gambling and betting.

Mobile gaming accounted for approximately 52% of the global market size in 2021,³ with almost 2.7 billion gamers — half of whom were from the Asia-Pacific region.⁴ Cloud gaming, which covers online gaming subscriptions, has also proliferated after the pandemic. The global spending on these services rose 135% year-on-year, from \$669 million in 2020

to \$1.6 billion in 2021.⁵ It is estimated to further grow at a 61% compound annual growth rate from 2021 to 2024, to reach \$6.5 billion by 2024.⁶

With the lead in 3D content innovation, gaming is set to become the foremost driver of the metaverse ecosystem. It will remain at the forefront, at least until other enterprise and entertainment applications become mainstream through the mass adoption of augmented reality and virtual reality devices. Remotely accessible, low-latency cloud-based gaming, powered by 5G networks and edge computing, is the future.

5G and gaming

Gamers, so far, have had little control over their network experience and device interoperability. They've had to contend with standard, nonpersonalized network subscriptions that treat all subscribers almost the same way. They've also had to purchase expensive, high-performance personal computers and consoles with sufficient processing power to play modern games. Games that are available only on specific consoles further limit gamers' ability to explore a wide range of content. These issues have driven the shift toward online gaming, which is accessible anytime, anywhere. The three key players in the gaming console space — Microsoft, Sony, and Nintendo — have meaningfully expanded their online gaming services in the past few years.

However, most wireless networks lack the capabilities to provide a truly real-time cloud gaming experience, which requires end-to-end network latency to be around 20-30 milliseconds.⁷ This puts those closer to the servers at an unfair advantage over others located farther away.

With 5G and edge computing, cloud gaming will become a level playing field. Seamless low-latency networks will enhance device interoperability,

with gamers able to pick up where they left off across devices — the way video streaming apps work currently. Of course, gaming on the go will become more convenient with 5G, potentially increasing the average time spent playing games.

With 5G, gamers are potential premium customers. Majority of them are willing to pay higher for better services, but are comparatively smaller in scale

According to a 2020 study by Ribbon Communications, 58% of gamers already pay a premium to their operators for a better experience, and 95% are willing to pay more for the same.⁸ Moreover, 79% of gamers would happily let go of their existing home broadband and mobile connectivity and switch to 5G subscriptions with "high-quality" gaming services. Evidently, gamers can now be treated as a niche segment that can be provided a premium network experience through customizations in bandwidth, edge computing capabilities, network slicing, and other such elements.

Here, telcos that ensure amazing gaming experiences through superior connectivity will benefit the most. But they can't do this all alone; they will need to partner with cloud computing players and gaming companies to create customized offerings for gamers across geographies.

More value through partnerships

Telcos have primarily been addressing the world's voice and data services requirements by building the network infrastructure. This approach worked out fine until the 3G era, but



content and applications have taken center stage since 4G was rolled out — pushing telcos to partner with streaming companies and other media services for content bundles to attract and retain customers. Now, 5G brings an even broader set of use cases, requiring an entire ecosystem of enterprises including telcos, game publishers, game development engines, streaming services, user device manufacturers, and cloud service providers. This necessitates strong partnerships and associations between participants, as integrating across the entire ecosystem will take both too much investment and too much time to pull off.

5G will be driven by wider industry ecosystems, as it will be tough for any one player to do it all. Here, telco-gaming-cloud partnerships will enable superior experiences for gamers across the world and drive new business opportunities for growth

Telcos should be at the forefront of this evolving ecosystem to best monetize 5G. They need to tap into capabilities such as cloud computing, creative content development, and

game streaming. As cloud computing increasingly moves closer to the edge, there are opportunities to create dedicated offerings for gamers that will help reduce dependence on fixed devices. Further, associations with gaming companies and esports events can help shift telcos' market positioning from standard network providers to strategic partners that enable new-age gaming experiences. Bundles with streaming services can be extended to gaming as a part of niche offerings. Telcos can take these initiatives to achieve core application/game development capabilities.

Several gaming-telco-cloud partnerships have already been

formulated globally. For instance, the American telco Verizon partnered with Amazon Web Services for edge computing capabilities to deliver low-latency connectivity and strong processing power to game developer Bethesda and its consumers.⁹ While developers can imagine and create experiences without any consideration of constraints around user devices' processing power, gamers can experience superior content without investing in expensive devices — a huge win-win for everyone. In South Korea, Microsoft has exclusively partnered with SK Telecom to deliver its 5G-based mobile cloud gaming service called Project xCloud.¹⁰ This provides Microsoft access to the carrier's one-million-strong 5G consumer base and strengthens its position in the mobile gaming space. Similarly, China Mobile (in Hong Kong) and Chunghwa Telecom (in Taiwan) have teamed up with cloud gaming companies Ubitus and Gamestream, respectively, to deliver high-speed, low-latency gaming customer experiences.^{11,12}

Considering the pace at which potential 5G-enabled metaverse experiences are evolving, telcos cannot afford to wait and build the requisite capabilities on their own to

deliver superior gaming experiences. Also, as the quest for personalization across consumer industries continues unabated, gamers are set to get their due as a priority group that demands premium services. Such associations between telcos, cloud computing companies, and gaming platforms will continue to grow to meet gamers' demands. For instance, esports events are fetching millions of dollars in prize money, at times even higher than flagship sports events such as Wimbledon. Such events could create great opportunities for telecom carriers to provide superior experience delivery as well as engage in essential branding and promotion.

Opportunities galore

Through partnerships, telcos are exploring multiple ways to deliver the smoothest gaming experiences — from direct carrier billing to bundled services with devices, network subscriptions, and all-access gaming plans. In Australia, Telstra offers high-speed, gamer-specific plans, gaming accessories (devices and mounts), the Microsoft Xbox All Access subscription, and a “game optimizer” add-on.¹³ Similarly, AT&T offers Nvidia's GeForce NOW and Google's

Stadia Pro cloud gaming services (including promotional offers) with its 5G network services. Several such products can be created with the right combinations of games and network plans.

However, it's not just about the breadth of gaming services. Telcos should ensure quality network experiences. They need to continuously test and measure performance metrics against benchmarks. Customer service would continue to be paramount in this highly competitive space. One way to achieve that might be to take a gradual but targeted approach to 5G deployment. Powering areas with high gaming demand first and creating gaming zones by utilizing parks or existing entertainment arenas will enhance customer experiences and adoption rates. Such initiatives can ensure great experiences despite limited coverage and generate better returns on investment.

Ultimately, all telcos will be vying for a share of the gaming market. This premium-paying customer base could decide which operators win, at least until the wider metaverse ecosystem is reasonably mature.



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