

WHITEPAPER

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# Impact of 5G on Gaming Industry

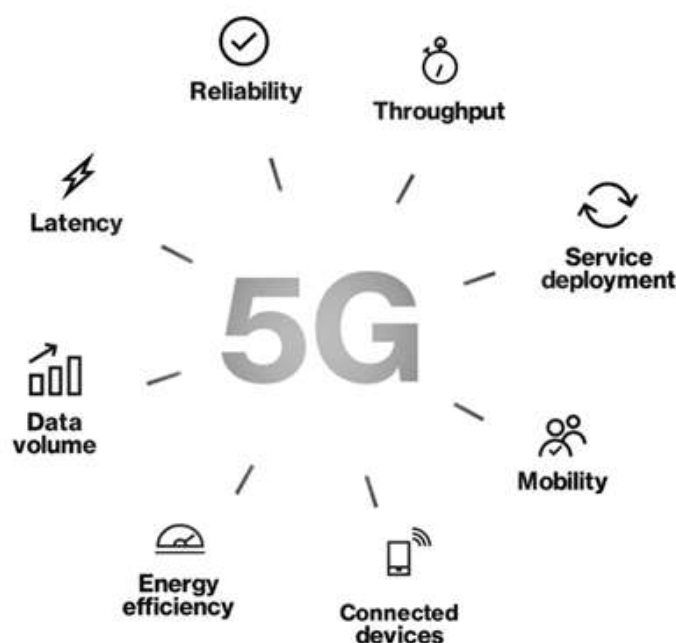
The gaming industry has been following a fixed cycle of development for a long period that involves them being able to witness upgrades at certain intervals. It results in different gaming factions such as console gamers to wait a lot for developed standards. The major upgrades in the gaming industry rely on how often console and PC hardware companies release better components. But with the arrival of 5G, this cycle is about to break. The potential of 5G in the gaming industry is huge and it could yield great opportunities for gamers. Let us take a look at how 5G will affect the gaming industry.

## Access to Lightning-fast Internet

Every network generation in the past has shown great improvements in speeds and latency. And the same is with the fifth generation of the internet, the 5G. Having predicted speeds up to 10 Gbps and that sums up about 100 times the current speed offered by any 4G connection available in the market. It concludes that 5G would bring great enhancements and possibilities for consumers providing high download and upload speeds over the networks. Resulting in gamers not worrying about download sizes anymore.

It is predicted that the 5G networks would feature just a fraction of network latency as the current 4G providers by just limiting it to a value of 1ms giving unimaginable advantages to the people of different industries, mainly the gaming industry. Causing the gamers to have the advantage of a real-time input-output experience in multiplayer games.

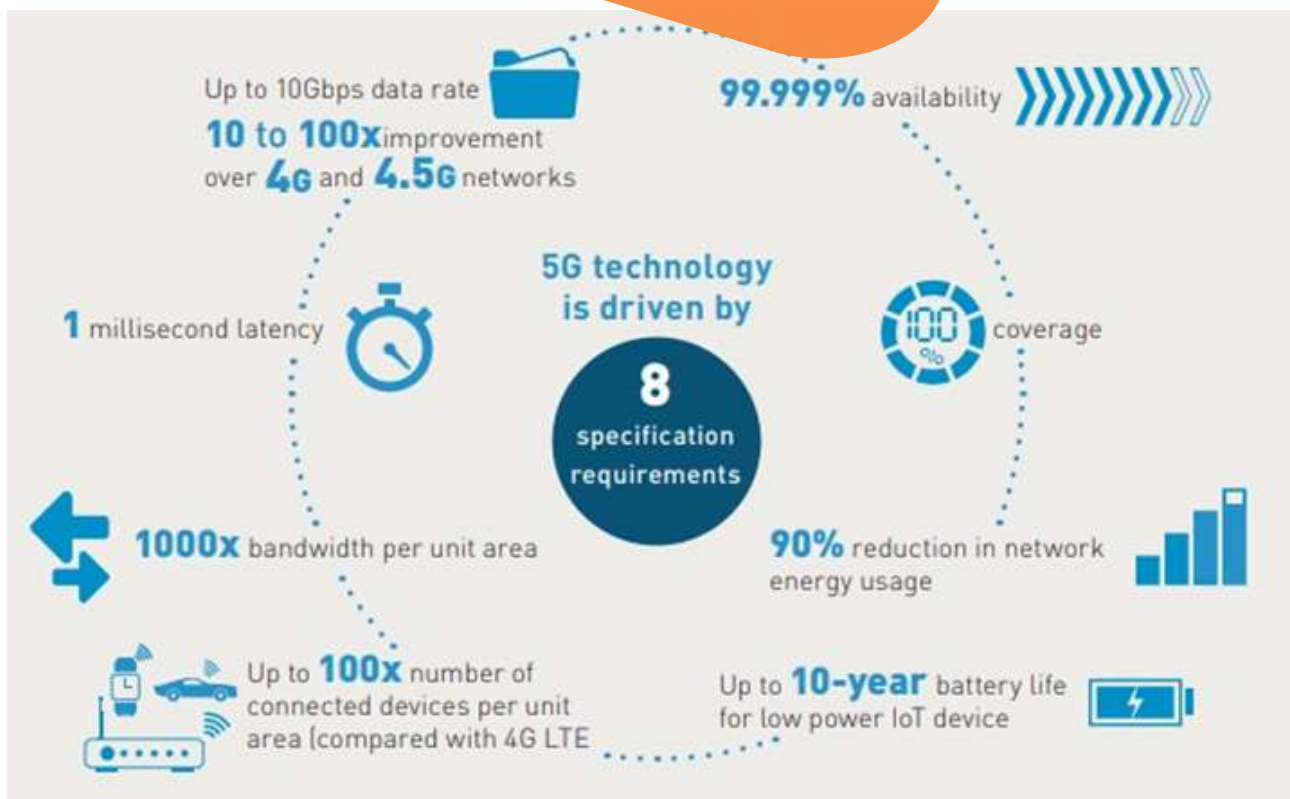
Apart from this 5G also has several other advantages such as very high bandwidth which would result in gamers having access to smooth and uniform internet resulting in them able to deliver uninterrupted entertainment to the people by streaming in the highest possible 4K quality.



# Effect on Gameplay & Game Development

The existing norms of the gaming industry are based on native devices and systems on which gamers need to upgrade individual components or the whole devices at regular intervals. But certain game companies have started working on a variety of projects featuring cloud-based gaming, which would enable gamers to experience top-notch gameplay on moderate devices having high end 5G internet. Furthermore, it will allow high-end 4K streaming of games over a variety of devices which allows the developers to have more room to develop.

All of this is possible when we'll have 5G networks online and in their full potential. The low-latency 5G networks would allow the developers and gamers to have access to computational power established over data-centers having the latest hardware. Allowing them to offload a major part of heavy computational stress over their machines. Being almost or more than 20 times faster than 4G, it will make things that took hours and days to get completed in a matter of seconds.



# Upgrading Smartphone Gaming



Source

While mobile gaming was limited to titles such as 'Candy Crush', and 'Poker' a while ago, with the 4G networks pretty huge titles such as PUBG and Fortnite came to mobile devices. Bringing the joy of playing a completely different genre of games over mobile devices also made it harder for the mobile manufacturers to pack in such great hardware in small devices making them able to handle such huge apps. Such games made it too hard for the devices to run them and required great computational power resulting in reduced battery lives and network lag caused by large loads over the networks. But with the arrival of 5G, mobile gaming will have a completely renewed face, consisting of cloud or gaming on the air there will be no downloads required to play any game. With 5G, gamers would be able to get a console or more likely an experience of a powerful PC on their phone without affecting the performance of their mobile devices and causing any network issues. With a majority of mobile manufacturers including the 5G compatible technology in their devices, it would be easier for gamers and users to get connected to a 5G community in just a fraction of time. The number of 5G phones in the market is likely to increase by an immense amount in the upcoming years.



## There Will Be One Billion 5G-Ready Phones by 2022

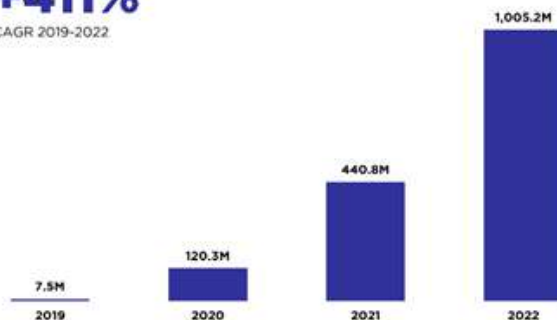
China will overtake South Korea as the largest 5G market by active smartphones

### ACTIVE 5G SMARTPHONES

Global | 2019-2022

**+411%**

CAGR 2019-2022



**21.8%**

of all active smartphones will be 5G-compatible by 2022.



**#1 MARKET**  
by 5G smartphones

China will be the largest market in 2022 by number of active 5G smartphones. We predict that there will be **391.5 million** active 5G smartphones in China by 2022, accounting for **34.7%** of active smartphones in the country.

# Main advantages of 5G in the Gaming Industry

- Elimination of lag

Lag is one of those things that are hated by the gamers the most and the main cause of lag is just the network over which the players are connected. The presence of lag even makes a game to be hated by a user. It is to a level where professional gamers even report unusual ping spikes and advantages to their opponents resulting in them losing whole tournaments. With 5G, the playing fields would be levelled giving the gamers access to a uniform internet connection having the least latencies and network bandwidth. It would result in the tournament and individual outcomes between players and teams to be based on their skills rather than the internet connection.

- Possibly Uncapped data

With the network speed of 5G, the amount of data a user can exhaust while being on a 3G or 4G network taking about a day could get vanished in seconds making them suffer for the data capacities on their network plans. There is a great possibility that the mobile service providers would also understand this and probably there won't be any issue regarding data caps in the upcoming future. It would be great news for mobile gamers especially because they will then be able to play their favourite games on their devices without having to think about the data limits.

- VR & AR technology

Currently, VR & AR technologies are subject to very high demand requiring expensive equipment and very high-speed internet. But the 4G internet still lies behind in providing up to the mark network quality to the devices. With 5G companies would be able to develop more advanced experiences and deliver them to the people and especially gamers without any lag pulling them out.

- Synced Input and Network Feedback

A variety of companies have developed technologies to provide haptic feedback to the users based on their game scenarios. It gives them the physical sensation of playing the game in real life. But with online games, there isn't much progress in the development of the same system as due to limited network capacity and latency, it could create issues in the gameplay itself.

But with 5G internet, the sync of user input with the haptic feedback could be advanced even more as there wouldn't be any network limitations to face. Hence, it could be possible to establish the same technology in mobile devices not just limiting it to consoles.

- Reduced need for Wi-Fi networks

With the 5G networks being available to mobile devices, it isn't too far that there wouldn't be a need for a wi-fi network by the people for carrying out huge downloads or streaming high-quality videos. Being a user of the 5G network, people would be able to download huge games with large files in seconds. Hence, reducing the need for Wi-Fi.

## Conclusion

5G will cause a huge disruption in the gaming industry but it would surely be beneficial for the whole gaming communities and users. May it be top-tier gaming of entertainment, 5G will provide lightning-fast and ultra level features embedded with different types of technologies to provide the people with experiences never seen before. The gaming industry is one of the key industries to benefit from 5G and it would surely provide the users as well as businesses with qualities that aren't possible till now. Hence, it is worth waiting for.

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