

A man wearing a brown sweater and light blue jeans is walking. He is wearing a patterned face mask and looking down at a smartphone in his left hand. He is pulling a black suitcase with a blue strap with his right hand. The background is a blurred city street with buildings and a blue sky.

Impact of Covid-19 on 5G

The global COVID-19 pandemic has drastically affected businesses across the world. This situation does not present an insurmountable challenge though. We are now noticing that the scale of impact varies across countries and industries. The timeline and duration of impact also varies across businesses. While there are multiple views expressed by industry experts and analysts on the manifestation of this impact, what is certain is that the pandemic has changed the way we do business. In this point of view, we examine how COVID-19 impacts the 5G rollout and service offerings of Communications Service Providers, and the adoption of 5G across industry verticals.

Impact on Communication Service Providers (CSP) Business

This section examines the impact in the 5G rollout and service offerings of the Communications Service Providers (CSP). The year 2019 was when many CSPs around the world started trials and rollouts of 5G networks. Several countries were busy getting ready for the rollouts by way of spectrum auctions, infrastructure contracts, and other readiness initiatives. Cut to 2020, and we are seeing some impact on both rollouts as well as readiness for 5G.



While some countries have delayed their spectrum auctions, a few others have brought in regulations relating to prioritization of spend. As a foremost, CSPs have an immediate responsibility of enabling remote working and connectivity for citizens, providing extensions to data consumption packages and facilitating additional quota during the lockdowns globally.

Due to the global lockdowns brought on by COVID-19, and further developments in economic situations, here are some likely impact predictions:



Gartner predicts that there will be near zero impact on CSP revenue this fiscal. That is because there is a shift in the network usage from office premises to personal premises. There is also an increase in internet traffic, movement to cloud, adoption of remote collaboration applications and so on



Analysys Mason predicts that there could be a 3.5% decline in revenues of CSPs due to the fact that enterprise mobile and fixed services have witnessed a big decline, while consumer services will be resilient in the current situation



There is an expectation of slow 5G capex spend in 2020 in developed markets, and expected to rebound in 2021



In developing economies, due to the impact on the economy, governments may defer the spectrum auctions as well.

Reduction in spends, and limited workforce to roll-out will create impacts such as:



Consumer and enterprise move to 5G will be delayed due to limited coverage



Telecom providers are expected to opt for focused capacity coverage for now, rather than large population coverage



Shortage of components supply due to the current situation regarding supply chain enablement, hence delaying the 5G rollout



2020 would largely be about 5G readiness or “Run up to 5G” and the 2021 will now likely be the year of inflection



CSP should continue their focus on readiness – orchestration, automation, network modernization, cloud adoption, NFVi and edge, and so on.

Once the economy comes out of the COVID-19 situation, CSPs are expected to invest in service offerings that will enable the new ways of working across industries. There will be a renewed focus on IoT, AR/VR, SD-WAN and the likes, all of these powered by a strong 5G network. Again, this will be a performance and capacity-based spend, rather than a blanket coverage, some services will be as follows:

- IoT-based services for various industry verticals like manufacturing, energy & utilities, mines, smart workspaces etc.
- AR/VR-based services for remote assistance, smart retail, immersive sports, remote education and remote health

- Computer vision-based services for safety, security and industrial automation SD-WAN services for remote working
- Edge enablement for many of these services for better performance
- Managed security services over the 5G access network.

While the communications industry will see a dip in the very short term, it will be the first to start showing signs of recovery. There will be an increased deployment in 5G network and 5G-related services over the next year and a half.

Impact on other industries

This section looks at how all industry verticals will likely leverage the COVID-19 situation to expedite their 5G-based technology investment for running their operations. There are a few common areas of interest across industries that encourage the use of 5G technology. This is the primary outcome due to social distancing, containment, and work-from-home arrangements. Social distancing, workspace impact, and associated disruptions have increasingly triggered a rethink on operating models within enterprises.

- Many industry verticals will fast-track their investment in 5G adoption to make sure the world will be ready to embrace the new ways of collaboration and operations
- The sudden workspace change has opened up many avenues for transformation – need for ultra high-speed connections at employee

homes, video and mixed channel collaboration among employees, secure remote operation of critical business processes are some examples. It is now observed that advanced video/audio setups are being installed in homes to accommodate the needs of the new workspace

- Adoption of SD-WAN at employee personal workspace will increase, clearly enabling good QoS and better security controls, both provided by a 5G network.
- Edge enablement of enterprise applications, service-based architecture, making cloud-native applications available at the edge are some of the initiatives that will enhance agility amongst enterprise workforce
- Quality & the experiential aspect of connectivity will be of prime importance going forward. This is where 5G offers an opportunity for quick or immediate availability of connectivity services, unlike current ADSL, Broadband and FTTH.



In addition to the remote workspace related investments as stated above, it is anticipated that a number of vertical industry specific changes will trigger 5G investments.

Technology areas such as IIoT, AR/VR, Robotics, Drones, Computer Vision are some examples that demand an underlying 5G network

Possible investments from each of the industries is as follows:

- Health – one of the industries that will see the highest impact due to 5G. Containment and distancing will drive adoption of remote consulting, AR/VR/Robotics assisted procedures, use of robotics in isolated patient care, use of drones and computer vision in critical patient care and containment.
- Manufacturing – adoption of AR/VR for remote-assisted production and field services will take center stage because of social distancing. Due to reduced workforce in the factories, there will be a push to adopt IIoT and high levels of automation. This in-turn will demand private 5G or 5G LAN adoption.
- Retail – AR/VR-based virtual shopping will grow because casual window-shopping will be impacted due to social distancing. Enterprises will adopt drone and computer vision based warehousing and delivery, higher push toward e-commerce, and automated just-in-time supply chain are some likely initiatives that will need 5G and Edge Cloud enablement.
- The food and drug industry will enhance its use of IoT in transportation and delivery, supported by 5G and blockchain. This is to ensure both safety of the consignment and that there is no contamination during transit.
- Use of autonomous vehicles and computer vision for surveillance will see an uptick in public safety and security monitoring powered by a 5G network

- Use of autonomous vehicles in public transportation and integrated mobility are being trialed across countries. Intelligent Mobility-as-a-service using multi-mode autonomous vehicles targets reduction in travel time, while simultaneously enforcing social distancing
- In leisure and entertainment, due to reduced public participation in events, use of AR/VR, UHD 3600 video and immersive experiences are already becoming the primary mode of audience engagement. Loss of revenue due to the lockdowns will trigger higher quality and higher priced cinema services, such as 8K video streaming in smaller halls and even in homes.

In sum up, there will now be a big push toward IoT, AR/VR, computer vision, autonomous systems, and robotics across industries, powered by 5G. While there are a lot of uncertainties and slowdowns across the world due to the COVID-19 pandemic, we may just see a silver lining at the end of it, or rather as we adapt to the new normal of things.

There is new investment expected in technologies associated with 5G and these investments will change the way the industry runs its operations.

About the author



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Viswanathan Ramaswamy has over 3 decades of industry experience in the telecommunications space, ranging from R&D to project implementation to network operations. Currently, Vishy is a Vice President at Wipro and heads the 5G business globally, across industry verticals. He leads all the initiatives in 5G, including autonomous networks, network analytics, network services, edge computing solutions, network security, and industry applications of 5G. Prior to this, he had been handling technology solutions & global practice for the CSP industry, responsible for building capabilities, engaging in consulting & delivery assignments with communications industry customers in initiatives such as digital transformation, IT/Network convergence, network modernization, SDN/NFV and so on. In his role, he participates in industry forums and events across the world and regularly meets customers and industry analysts. Before rejoining Wipro, Vishy was Senior Vice President in charge of Technology Strategy & Architecture, and CTO for B2B Business at Vodafone India. Vishy has built many technology practices and has led businesses during his industry journey spanning three decades. He holds a Master's degree in Electronics and a Bachelor's Degree in Electronics and Communication Engineering.



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