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TELECOM TRENDS TODAY

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Telecom Trends Today

The pandemic has drastically altered the world we live in today in many aspects. It has pushed boundaries and required us to adapt to multiple changes, including the new reality we know today. In the business sector, innovations from all aspects had (and still have) to be considered. Some businesses struggle to keep up with the increased demands of innovation, while others struggle to survive at all.

Telecommunication (telecom) companies have become the backbone for many businesses to survive and recover in 2021. Telecom products and services help us live, work, and conduct business more effectively with advanced wireless technologies.

The value of mobile and online communication has never been greater because of this. However, telecoms now face several challenges, such as extremely high loads on their systems and security risks. To be able to address the challenges and benefit from their innovations, they embrace new technology trends such as 5G, Internet of Things (IoT), big data, cloud, and more.

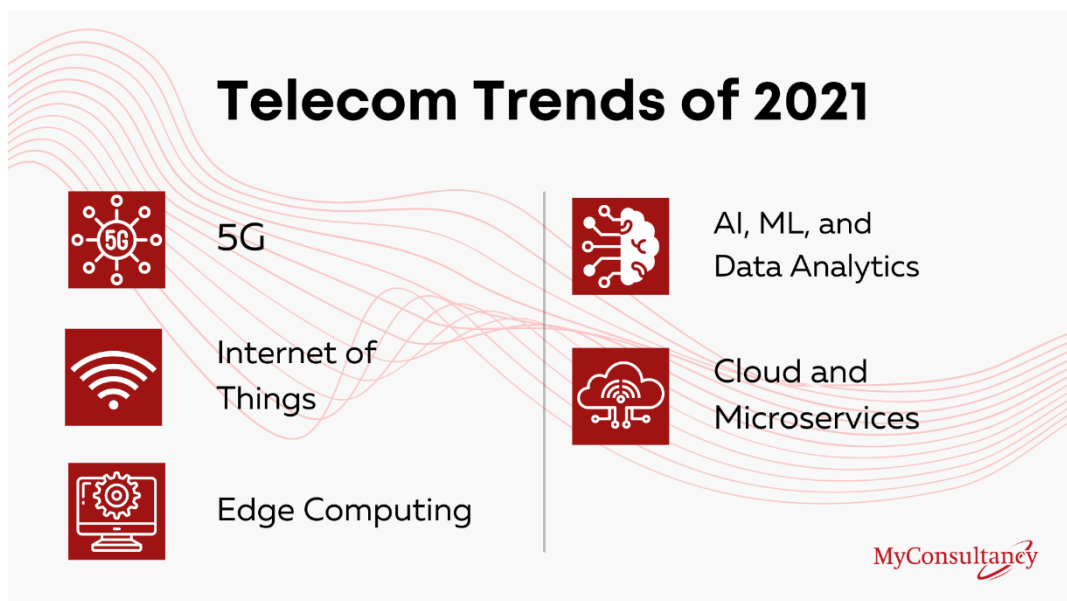Here is a breakdown of the currently emerging trends in the telecom industry today.

Figure 1: Emerging Trends in the Telecom Industry Today

Trend #1: 5G

5G has been perceived with a considerable deal of controversy. This fact, however, does not undermine the importance of 5G in the telecom industry today. With 5G technology, businesses will get unprecedented real-time insights like never before and total control over their products, services, and assets.

The speed and low latency of 5G is set to aid in the transformation of virtually every industry, ranging from manufacturing to healthcare. For instance, 5G could benefit factory floors with equipment such as wirelessly connected robotics and automated assembly lines, potentially allowing the monitoring of these processes to be more precise and visionary than ever before. By this logic, the healthcare industry should benefit from a low-latency, high-speed 5G network as it will be able to deliver commodities such as 3D imaging, advanced diagnostics, and wireless connections to robotic surgical tools in near real-time.

According to GSMA, 5G is expected to contribute more than $2 trillion to the global economy over the next 10 years. However, it is no longer sufficient for telecom to merely provide the service of a basic network—they must bring together every doable innovation that they are capable of. This process often involves integrating 5G with edge computing and IoT devices.

This brings us to the next telecom industry trend, namely the Internet of Things.

Trend #2: Internet of Things

The Internet of Things (IoT) in the telecom industry (as well as others) now helps businesses meet urgent technological needs. As an example, IoT has made it possible to provide SIM card-enabled connectivity between devices in emergency health centres or in largely unstaffed factories powered by robots and machinery.

The demand for IoT in the telecom sector and other industries will continue to increase in 2021 and beyond. Healthcare, automotive, manufacturing, and retail will benefit from this technology the most. 5G enables high speed and low latency on IoT devices, thus, it makes them exchange data almost instantly in real-time. Telecoms will have to expand and upgrade their networks to keep up with the growing need of IoT consistently but innovatively.

Apart from 5G, IoT is closely connected to edge computing. View this emerging trend in the telecom industry in detail with Trend #3 below.

Trend #3: Edge Computing

According to ABI Research, the syncing of edge servers with telecommunications infrastructure presents an opportunity worth $54 billion by 2024. In accordance with this fact, IDC states that 45% of IoT-generated data will be stored, processed, and analysed at the edge of networks by 2023.

There are many reasons for it—the first and foremost reason being the emergence of new business models. Consider this: Automated assembly lines, 3D imaging, autonomous vehicles and remotely operated surgical robotics rely heavily on high-speed connectivity as well as low latency levels. Thus, it is critical for such devices that data is transmitted in real-time and decisions can be taken instantly. Therefore, companies implement edge computing to achieve

as low a latency as possible—to become more reliable for the upcoming and widespread advancement of technologies being implemented within business plans.

Edge computing means moving the computation away from data centres to the edge of the network. This means that smart devices, mobile phones, or network gateways provide services on behalf of the cloud.

In addition to that, edge computing allows the processing of real-time data (that is collected and transmitted through connected devices) to be sped up. Speeding up data transfer by shortening the distance that it has to travel will not only improve latency but also permit complex functions to occur within the network, near the end user; this means that the end user's device would require less processing capability and would also consume less energy.

When it comes to data processing and analysis, there is a long-lasting telecom industry trend; they are: AI, ML, and data analytics.

Trend #4: AI, ML and Data Analytics

The next generation of wireless networks use data science and machine learning to forecast peak traffic and improve network capability. Data analytics through machine learning and artificial intelligence allow telecoms to boost network performance and streamline network cost through automation.

As the network of telecoms begin to expand and become more complex—fuelled by the adoption of 5G and IoT—it causes further issues with network performance and maintenance. Acknowledging this, telecoms can no longer monitor and maintain their networks without data analytics through Artificial Intelligence (AI) and Machine Learning (ML).

Trend #5: Cloud and Microservices

Telecoms need to process numerous requests and transactions while simultaneously finding ways to enhance their services with new operational capabilities. Microservice architecture can aid the telecom industry address both these needs. Hence, the microservice architecture has become one of the latest rampant trends in the telecom sector.

Migrating to microservices means breaking down complex monolithic architecture into smaller and more manageable units. In the telecom industry, microservices are applied in three main areas: network management, business support systems (BSS), and operations support systems (OSS).

Final Thoughts

This year, the largest focus and spotlight is on 5G deployments as well as the massive upgrade in connectivity, speed, and digital transformation that it brings along. Research shows that telecoms will continue to maintain global competitiveness and increase labour productivity— all while leveraging on the emerging technologies that have the potential to revolutionize customer experience, network expansion and infrastructure management.

So, what can we expect from all of this?

We should expect the telecom industry to guide and lead innovation through the new normal—that we are now getting used to—as network demands grow larger by the day. Consistent connectivity and enhanced customer service are likely to become the two key elements for the future of telecommunication companies, especially if they wish to position themselves in a prominent manner.

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