

TRANSFORMATION OF TELECOMMUNICATIONS COMPANIES THROUGH DIGITAL INVESTMENTS

Omarova Saltanat Toronbekovna

Master Department of Computer Science, Programming and Communications
Osh Technological University

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Abstract. Automation will become a key factor for telecommunications companies in achieving competitive differentiation in an increasingly saturated market. Whether they focus on providing exceptional connectivity or they seek to offer new solutions that go beyond connectivity, telecommunications companies will have to implement more automation into their networks and maintenance operations to cope with declining revenue from network commercialization.

Keywords: automation, telecommunications, electrical communications, digital technologies, Internet.

INTRODUCTION

Between the invention of the telephone and today, when we have computers, the Internet, smartphones and social media platforms, there is a vast history of sharing information on a scale that was once unimaginable to humans. But one thing is for sure; Telecommunications have played an important role in global trade and politics. For example, on May 17, 1865, an agreement was signed to create the world's first modern international organization - the International Telegraph Union. Today, World Telecommunication Day is celebrated around the world on the same day to commemorate the signing of the first International Telegraph Convention and the creation of the International Telecommunication Union under the auspices of the United Nations in 1969. As technology continues to pave the way for a more connected world, let's look at the future of telecommunications.

MATERIALS AND METHODS

Over the past decade, telecom operators have had an unprecedented economic and social impact.

Telecommunications companies are increasingly turning to digital investments to transform their business models and become more competitive. Digital investments allow them to modernize infrastructure, develop new products and services, improve customer service, and optimize business processes.

One of the main areas of digital investment for telecommunications companies is the development of next-generation communication networks, such as 5G, which provide higher data speeds, reduced latency and greater network capacity. This allows companies to offer new services such as the Internet of Things (IoT), virtual reality and augmented reality technologies. In addition, digital investments are helping telecom companies improve data analytics to better understand customer needs and offer them personalized services. Digital technologies also help automate customer service and network management processes, which can reduce costs and improve operational efficiency. By covering nearly the entire world with data-enabled infrastructure, telecommunications companies have enabled dramatic increases in productivity and enabled everyone to connect, work, play, learn and communicate. This has allowed the rise of digital leaders who have changed our daily lives and contributed to the growth of digital businesses

such as Uber, YouTube, TikTok, etc. Despite its primary role in transforming the world, the industry has been challenged by the digital revolution (e.g. VOIP, exchange instant messaging), and it failed to realize the value it created in the digital world and remained primarily an infrastructure operator. As customer expectations radically shift toward personalized omnichannel experiences, this presents an opportunity for telecommunications companies to move from being a means of electrical communication to an era of digital transformation to meet these growing demands.

The idea is that telecom companies or their alliances can become global technology champions, which includes expanding services beyond connectivity with a focus on providing users with a seamless digital experience. This shift is known as the transition from Telco to TechCo. Many companies are already experiencing this transformation. For example, Vodafone is separating the organization into network infrastructure and digital functions, while expanding its range of services using 5G, IoT, cloud and edge infrastructure. A similar move is taking place with e& (formerly the Etisalat group), which is shelving its business and moving from communications to selling integrated solutions to various target groups closely linked to business lines. Another example is the Camara coalition, which is working to open up advanced network APIs (including 5G) through platform play.

This shift provides an opportunity for cloud communications service providers to partner with telecom companies and offer communications platform as a service (CPaaS) as a solution for creating customer-centric experiences and increasing engagement.

RESULTS

Using CPaaS allows telecommunications companies to leverage real-time communications technologies that improve customer experience, reduce costs, and promote deeper engagement. This allows them to simplify the availability and adoption of various communication channels such as chat applications, SMS, RCS, voice, email and video. It also provides a platform to offer various new technologies in the form of APIs and services.

The year 2023 witnessed the widespread adoption of 5G technology, which will revolutionize the telecommunications industry. More than just faster 4G, it can improve the digital customer experience through speed, quality and ease of use. From machines and objects to devices, it can connect almost anything. With significantly faster speeds and lower latency, it is ideal for applications that require high throughput or real-time communications, as well as supporting advanced services such as Metaverse.

DISCUSSION

Telecom companies are making efforts to provide immersive experiences. This will become even more important with the advent of the next generation of communications - 6G. Metaverse can impact various aspects of a business, such as improving customer experience and marketing. The telecommunications sector will play a vital role as fast and secure connections will underpin expansion. Its advanced internet connectivity also provides the ability to connect multiple devices, making it ideal for the Internet of Things (IoT) ecosystem.

Internet of Things is another major trend in the telecom sector that will gain momentum with 5G. It is a network of physical devices connected to the Internet, enabling communication between smart home applications and wearable gadgets. The telecommunications industry is well positioned to build IoT infrastructure that delivers superior, end-to-end customer experiences.

Artificial intelligence (AI) is set to play an important role in the future of the telecommunications industry. Its features, such as predicting human behavior patterns and enabling operations and customer interactions, can improve the user experience by helping to more effectively resolve hardware defects or customer issues that may affect it. AI can detect network problems, perform self-service repairs, protect networks from fraudulent activity and automate tasks, improve decision-making and provide personalized service.

Additionally, the recent rapid growth of generative artificial intelligence (such as GPT or similar models) allows intelligent and hyper-automated bots to transform our experiences and perform various services. Thus, applications based on cloud computing technologies in the telecom industry will lead to more chatbots and visual assistants. The sector is moving towards virtual networking and the shift to cloud among telecom service providers is also significant.

With the development of instant messaging systems (such as WhatsApp as well as RCS that go through telecom companies) and advanced features in instant messaging channels, it is now possible to offer rich experiences to users through these channels, similar to what happened with WeChat in China. Examples include anything from conversational marketing, conversational commerce, and conversational support, where users can complete a business task while communicating in their favorite channel. There are many examples of this trend, but in one of the most challenging cases, we recently partnered with Uber to enable customers to book Uber via WhatsApp in India.

As telecom companies build more complex applications for their customers at the front end, there is a need to expand and offer cloud and edge capabilities at the core. That being said, many telcos are partnering with cloud service providers to transform their own platform, that is, consolidating data centers and offering a single cloud platform to internal and external users through a secure and interoperable telco-mediated cloud, allowing everyone to have a faster path to monetization. services mentioned above.

As the world moves towards advanced digital technologies, harnessing them for developing economies and bridging the digital divide is essential. The future of telecommunications can only be imagined if its benefits reach the least developed countries. That's why this year's World Telecommunication Day theme is about empowering the least developed countries.

An interesting example of harnessing the potential of least developed countries is Bangladesh. Driven by the push for digital inclusion, the country will grow at a CAGR of 9% in the next five years. It is experiencing rapid growth as it strives to realize its Vision 2041, for which the government recognizes the importance of the Internet and digital technology as critical enablers. In fact, least developed countries are places where the transition from telecom companies to technology companies can happen at a much faster pace.

CONCLUSIONS

The future of telecommunications promises to be a remarkable era of connectivity, innovation and transformation. As technology advances at a rapid pace, we can expect this sector to play a crucial role in shaping our society and revolutionize the way we communicate, work and live.

With 5G and the integration of technologies such as artificial intelligence, virtual reality, Internet of Things and blockchain, we can expect faster speeds, seamless connectivity, superior customer experiences and new business models. They will change every industry, including

healthcare, education, transportation and entertainment. However, issues such as universal access, privacy and security need to be addressed. By addressing them responsibly and fostering collaboration, we can shape a connected and prosperous future for everyone.

Thus, digital investments play an important role in the transformation of telecommunications companies, providing them with a competitive advantage in today's digital economy.

Digital investment is key to transforming telecom companies in today's digital age. These investments enable companies to improve their infrastructure, develop new digital products and services, and improve their customer experience. Through digital investments, companies can create new solutions, improve their processes, and even rethink their business model, ultimately allowing them to remain competitive in the market.

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