Telcos turn to AI and operations automation in 5G networks: ABI Research

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London, United Kingdom - 5G is a composition of several network layers that leverage technology with varied maturity levels, such as Open RAN, network slicing, cloud infrastructure (private, public, and hybrid), and cloud-edges. With respect to cloud-edges, the broader Artificial Intelligence (AI) industry is witnessing a migration of AI to the edge. For example, the edge AI training and inference market for chipset sales is expected to grow from US$2.6 billion in 2020 to US$10.7 billion in 2025, at a CAGR of 35%. Furthermore, new enterprise use cases place new performance, agility, and latency requirements on the network. These, along with the ongoing quest to drive new growth, are compelling the industry to shed human-intensive networks in favor of an intelligence-driven ecosystem, finds global tech market advisory firm ABI Research.

Of late, telecoms are actively expanding the utilization of AI/ML beyond merely digitizing internal and external interactions. "Many Communication Service Providers (CSPs) are already on a journey to become augmented service providers where AI augments human decision making for prediction, analysis, and new revenues," explains Don Alusha, Senior Analyst at ABI Research. Rakuten, for example, has renamed its Network Operations Centers (NOCs) to Service Experience Centers (SECs) as it implements extreme automation for self-aware networks. In addition, Telefónica Tech is a new venture to incubate new growth based on AI/ML, cloud and IoT/Big Data. "AI/ML capabilities enable the industry to leverage IT-oriented nimbleness and scale as they seek to manage the complexities of today's networks and establish new commercial models," Alusha adds.

New commercial models will need to complement existing asset-intensive environments where an understanding of cost of goods sold, inventory turns, managing factories, and supply chains is key to success. In the new world of cloud, AI/ML, and software, tech providers do not manufacture a product and sell it. "They sell a capability. They sell knowledge. They create it at the same time they deliver it. The business model is different and so are the economics. DriveNets, Enea Openwave, Ericsson, HPE, and Nokia are some vendors among many others that are building software-centric ways of marketing and selling solutions. The point is that AI/ML-based platforms are re-shaping existing commercial models. The winners will be those who act decisively and thoughtfully," Alusha says.

For CSPs, continued maturity of AI/ML will be a key enabler of new value creation in their journey to become a digital service provider. Technology is a key pillar of that journey, but there are other key dimensions, that if not considered part of the overall digitalization journey, may limit CSPs' ability to capture the full value at stake. Specifically, change management is critical and constitutes the bulk of the effort as CSPs embrace new ways of working. Equally important is to embrace openness and break the siloes, two sides of the same coin. CSPs that are investing in AI/ML-based platforms must

consider that efficiency will come from sharing knowledge and embracing open platforms where APIs and data can be easily accessed.

"AI/ML, big data, and open APIs offer agility and the ability to drive innovation and enable faster and better decision making. Consequently, CSPs must realize that the new world in cellular must start with a foundation on software and API-led connectivity. The ability to harness the power of software platforms and AI/ML is bound to be a defining feature of CSPs of the future. This may well mean that, in addition to bolting on software and intelligent capabilities, CSPs need to learn how to build them as cloud-edges, Open RAN, and 5G core proliferates in the ecosystem," Alusha concludes.

These findings are from ABI Research's AI and Operations Automation in 5G Networks application analysis report. This report is part of the company's 5G Core & Edge Networks research service, which includes research, data, and ABI Insights. Based on extensive primary interviews, Application Analysis reports present in-depth analysis on key market trends and factors for a specific application, which could focus on an individual market or geography.