CREATING THE 5G MARKETPLACE: A LUCRATIVE PLATFORM FOR NETWORK PROVIDERS

by Manju Kygonahally & Avtar Chaggar
With 5G imminent, network providers should plan now to create a rewarding digital marketplace where buyers can explore and procure the new breed of game-changing devices, applications and enterprise services.

Commercial 5G networks will illuminate a new generation of services and capabilities thanks to the investments and heavy lifting of communications service providers (CSPs). What’s uncertain is how bright a light will shine on the CSP’s bottom line. Fortunately for CSPs, unlike with 3G and 4G, this time around they are ideally positioned to play a more central role in the economic ecosystem — especially if they act now to corral partners and create a marketplace of 5G services.

Ultra-fast 5G networks will more than power new smartphone and communications features. They will unleash news ways to move, operate and live. A vast, new array of sensors and industrial Internet of Things (IoT) devices and solutions will proliferate across businesses, cities and environments of all types. Selecting the right solutions might be daunting for the uninclined buyer who has never before experienced the complex and rich capabilities of 5G.

This need to create market understanding and simplify the selection process sirens an opportunity for CSPs. They are ideally positioned to assemble 5G solution providers and their industry offers into a digital marketplace where enterprises, governments and other organizations can navigate through and select among the available technologies and services. To embrace the opportunity, many CSPs are now setting plans to pivot their model to play the role of a digital services provider (DSP) that sits at the center of this marketplace ecosystem (Figure 1). Offers presented through the marketplace will weave together the required devices, software, equipment, bandwidth and dynamic network slicing into complete solutions. Most notably, this digitally intelligent ecommerce platform also will help CSPs gain returns on their steep investments in equipment, spectrum, cells and services designed to meet 5G’s diverse and extreme requirements for latency, throughput, capacity and availability.

Enterprises will be chief among the earliest 5G adopters. With 5G, businesses will significantly improve operations, provide more compelling customer experiences and launch interactive, connected services. The legacy world will be left behind as organizations quickly embrace the new class of wireless capabilities from cellular IoT and connected vehicles to new drone applications and extended reality, such as virtual and augmented reality.
Meeting 5G demands through network slices

As 5G networks flourish, new solutions will emerge, with many yet to be imagined. Industries, governments and institutions will be quick to explore how 5G-connected solutions can bring greater intelligence and connectivity to environments, machines and experiences. 5G will usher in the factory of the future, enabling fully automated and flexible production systems. Remotely operated robotic surgeons will perform simple procedures as well as life-saving operations. Patient sensor chips, either topical or internal, will monitor vitals, support preventative care and dose medications to meet a patient’s changing conditions.

For 5G applications, network slicing lets operators provide portions of their networks to address specific customer use cases. To properly engage in network slicing, CSPs should take a holistic, measured approach to how they can best serve individual use cases or market segments, such as for transportation, radio access networks, or edge-cloud connectivity.

CSPs should plan to offer 5G “slice as a service,” by offering network allocations that serve specific industry solutions. This will allow for more optimal service-quality performance that’s adapted and coordinated across the entire network.
Inside the new 5G marketplace

For CSPs, the digital marketplace will serve as a melting pot of offers, clustered around specific vertical market needs, and technology and process applications. Organizations that seek 5G solutions will join the marketplace to explore the available products and services. When they are ready to move forward, buyers will use the ecommerce platform to select and configure solutions through standard quote-to-order and procure-to-pay processes.

The underlying architecture includes a low-code rapid application development platform. This will ensure that new solutions can be added quickly to keep pace as the 5G market matures and new business models emerge. Buyers and providers should be able to engage with the marketplace via any preferred channel to ensure a seamless experience.
Within the platform, a digital business support systems (BSS) layer should include applications and provide for such services as a master catalog, configure price quote, contract lifecycle management and order management. Ideally, the master catalog will serve as the commercial orchestration engine, as it recognizes product versions, configurations, bundles, breakdown by industry, and pricing parameters.

Buyers will request the appropriate 5G network slice directly through the catalog. To complete the cycle, after an order is created and ready to be fulfilled, the system will generate a contract that’s automatically populated with critical information such as items, services, prices and service level agreements. All key performance indicators should be mapped back to and continuously updated in the CRM system. As a result, order and customer profitability will be able to be tracked in real-time.
A vital element of the stack is an intelligent network slice manager that receives inputs such as network configuration data, network performance data, commercial contract obligations and IoT streaming analytics. These inputs then converge within a neural network framework that uses artificial intelligence (AI) and machine learning (ML) to make intelligent network-slice requests and to ensure newly defined 5G quality of services (QoS) categories are recommended.

If national roaming is an option, services from multiple network operators can be requested to ensure that the best-case QoS slice is allocated within a given geography. The introduction of AI and ML within the slice management function improves platform performance and helps ensure more economically beneficial transactions for all contributors.

In our white paper “Fast-Tracking Digital: A Blueprint for Communications Service Providers,” we shared models that illustrate how customer journeys should be continuously measured and improved to provide an optimal customer experience at every touchpoint. With this new digital services platform, a multi-dimensional approach to data integration will include not only customer journey data, but also network and IoT streams. These multiple data streams will create rich insights to help resolve customer issues and personalise recommendations or next-best actions with profitability as a key performance indicator.
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