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# 5G RAN Slicing: Capture new business revenues in the 5G era

Address connectivity performance  
demands and enable new use  
cases with Ericsson 5G RAN Slicing

The exponential growth of wireless data traffic over the past three decades and the advent of 5G technology represent an evolutionary step for communication services. The latest generation of mobile networks will do more than improve connectivity for consumers, industries and enterprises—5G has the historic potential to completely transform society as we know it.

Low latency, ultra-reliability and high data throughput are all hallmarks of 5G. Together, they will enable new opportunities for innovation and impact the way we do business. 5G subscriptions with a 5G-capable device are forecasted to reach 3.5 billion in 2026, accounting for around 40 percent of all mobile subscriptions.<sup>1</sup> This figure alone makes the consumer market an attractive 5G revenue opportunity for service providers.

By 2025, we can expect more than 4.4 billion cellular IoT connections.<sup>2</sup> Just imagine all those connected devices continually gathering and sharing valuable information in real time to make immediate, positive change.

The insights that are derived from the use of these devices can contribute in countless ways to improving our lives and the way we do business. For example, they could enable factory production lines so intelligent they can predict and prevent interruptions before they occur. They even could facilitate the creation of life-saving applications that transform disaster situations into manageable ones.

For service providers, it is high time to explore beyond traditional mobile broadband services and look for new revenue models for the consumer and enterprise market segments. A new network slicing solution, designed and implemented especially for 5G, represents a wealth of incredible opportunities for service providers looking to offer exciting new 5G services with guaranteed performance.

### Network slicing in the 5G era

A 5G network slicing solution for radio access networks (RAN) is here and it is starting to produce encouraging results. It enables the creation and delivery of highly efficient solutions (such as intelligent video surveillance or automated guided vehicles) that address the relentless demand for superior bandwidth and services requiring low latency or ultra-reliability.

Network slicing accommodates several independent logical networks for different business needs with guaranteed fulfillment of service-level agreements while running on shared physical infrastructure.

### Key use cases for 5G network slicing



**Manufacturing:** This is a wide and varied sector, covering everything from microbreweries to aerospace facilities and vehicle assembly lines. According to the World Bank, manufacturing accounts for roughly 16 percent of the world's GDP, making it a foundation of the global economy.

While the global manufacturing sector continually seeks to increase automation to achieve the next level of productivity with smart factories and warehouses, new solutions also produce new and complex network requirements. For example, as the number of remote-control and autonomous robots and automated guided vehicles on the factory floor increase, manufacturers are demanding increased network reliability and predictable latency.

Service providers can use 5G RAN slicing to offer customized slices to ensure that autonomous robots remain connected, regardless of where they are in the factory, with low latency to ensure the degrees of precision and consistency required.

5G network slicing supports end-to-end management and orchestration across all parts of the network: RAN, core, and transport. The network slices are managed by an automation system that creates, designs, deploys and operates the network slice across multi-network domains. For its part, 5G RAN slicing secures the effective allocation and prioritization of the limited resources available. Service providers can then deliver 5G use cases for consumers and enterprises that were typically supplied with mobile broadband services. It will drive further innovation in areas such as smart manufacturing, public safety and online gaming—all with lightning-fast connectivity and enhanced overall performance.



**Online gaming:** Today, gaming is not just a pastime for kids. It is evolving and attracting a much wider user base. An Ericsson Consumer & IndustryLab survey of 7,000 consumers found that 90 percent of those who play video games at least weekly were negatively affected by lag, sometimes quitting the game as a result.

Different gaming genres have different data rates, latency and reliability requirements on mobile networks. This is an area where service providers can offer customized slices for cloud gaming or any augmented reality (AR)/virtual reality (VR) application. The slicing framework can reserve dedicated resources by orchestrating these across the RAN, core, and transport networks.



**Public safety:** First responders, such as law enforcement officers, paramedics and firefighters, are there to keep our communities safe. As these essential organizations embrace new technologies, including smart surveillance and AR, latency and reliability play increasingly critical roles.

Customized slices will ensure that AR-assisted virtual dispatchers can provide comprehensive information to a first responder team leader on-site to aid decision-making. They can also use this information in real time with heads-up displays and other IoT-enabled equipment. 5G RAN slicing avoids the need for a dedicated carrier and delivers the necessary dedicated network resources when required. Service providers will play a critical role in this sector with the capability of delivering reliable, high-performance, and secure connectivity to public safety agencies.

1. Harnessing the 5G Consumer Potential. (2020). Ericsson.com. <https://www.ericsson.com/en/reports-and-papers/consumerlab/reports/harnessing-the-5g-consumer-potential>  
2. Ericsson Mobility Report. (2020). Ericsson.com. <https://www.ericsson.com/en/mobility-report/reports/november-2020>



**New services for the customers of today and tomorrow**

5G RAN slicing will enable service providers to add greater degrees of flexibility and versatility to their 5G networks. By combining 5G and network slicing software, they will be ideally positioned to offer new ways of experiencing AR, VR and cloud gaming. With these new services, they can gain access to potential new revenue sources and smarter ways to support end customers. There are multiple areas of opportunity in this space, including Massive IoT and video on-demand services in 4K/8K and new formats. However, three use cases stand out for their enormous potential and scalability: online gaming; smart manufacturing; and public safety.

**The Ericsson 5G RAN Slicing advantage**

Ericsson can customize service offerings according to varying needs, reduced risks, increased flexibility, and agility. The new software solution, Ericsson 5G RAN Slicing, as a part of end-to-end network slicing capabilities, offers service differentiation with short time-to-market (TTM) and improved total cost of ownership (TCO) in addition to:

**Multi-dimensional service differentiation:**

Unique handling of slice-aware QoS and dynamic radio resource partition for guaranteed SLA fulfillment

**One millisecond level resource sharing:**

Dynamic radio resource sharing at one millisecond for best spectrum efficiency and network asset utilization

**Ericsson Radio System and Cloud RAN:**

Supported on Ericsson Radio System and Cloud RAN with 3GPP-compliant, multi-vendor environment for slicing features

**Scalable, flexible architecture:**

Scalable and flexible architecture to support all use cases with full dynamic orchestration

Ericsson 5G RAN Slicing provides exciting opportunities to monetize 5G investments with potential new revenue streams from the consumer and enterprise segments. A 2020 Ericsson report estimates a USD 712 billion addressable consumer market by 2030.<sup>3</sup> The market for network slicing alone in the enterprise segment is projected at USD 300 billion by 2025.<sup>4</sup> The ability to guarantee high-quality 5G services to consumers and enterprises is going to be a game changer, spurring 5G business growth.

Learn more about 5G growth opportunities with Ericsson RAN Slicing.



3. Harnessing the 5G Consumer Potential. (2020). Ericsson.com. <https://www.ericsson.com/en/reports-and-papers/consumerlab/reports/harnessing-the-5g-consumer-potential>

4. GSMA data

## About Ericsson

Ericsson enables communications service providers to capture the full value of connectivity. The company's portfolio spans Networks, Digital Services, Managed Services, and Emerging Business and is designed to help our customers go digital, increase efficiency and find new revenue streams. Ericsson's investments in innovation have delivered the benefits of telephony and mobile broadband to billions of people around the world. The Ericsson stock is listed on Nasdaq Stockholm and on Nasdaq New York. [www.ericsson.com](http://www.ericsson.com)