NOKIA

The path to successful 5G monetization

Unlocking 5G revenues will depend on a major shift toward adaptable monetization systems

Operator insight report

Are CSP's existing BSS ready for 5G?

The advent of 5G technology is revolutionizing the telecom industry through innovative use cases and business models. As a result, it is also forcing an evolution of monetization systems that Communication Service Providers (CSPs) need to deploy in this new ecosystem.

Nokia surveyed CSPs from around the world to better understand the 5G revenue drivers, enterprise and consumer services and business models that will impact Business Support Systems (BSS) evolution in the coming years.
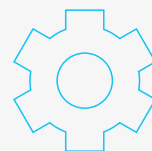
98%

of CSPs surveyed plan to alter their BSS systems to support 5G

Methodology

- Quantitative Online survey on 5G Monetization trends, drivers and BSS evolution paths

- 100 CSP respondents

- Global reach:
  Covering Americas (35), EMEA (42), APAC (23)

- Data collected
  September - October 2021

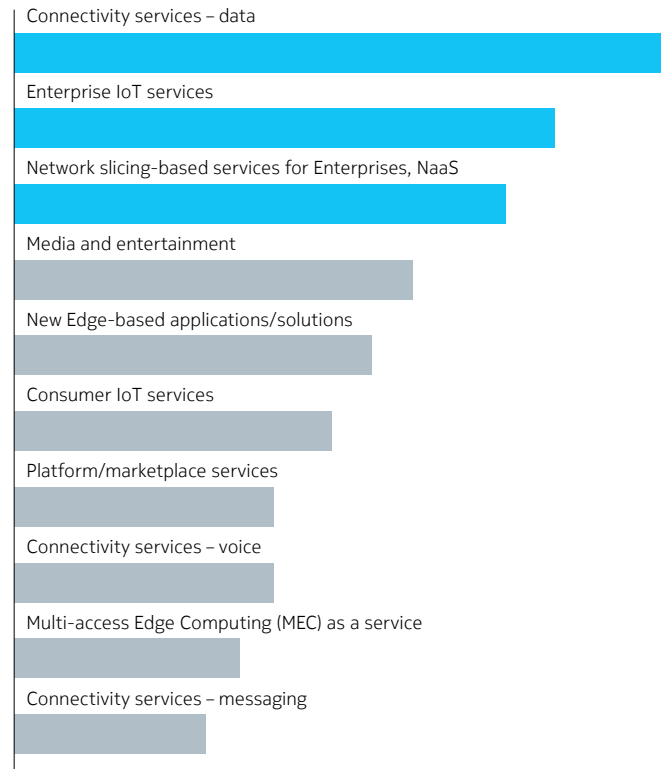# High expectations for revenue from 5G enterprise services

The 5G economy looks to be driven in large part by the enterprise opportunity and the new business models they create for CSPs. To monetize this beyond the traditional data plans of the 3G/4G era, they will need to evolve their legacy monetization systems to support new service offerings and ecosystems.

Where do CSPs expect to derive 5G opportunities? What business models do they plan to support? What are their planned paths for the future?

Though CSPs continue to invest in consumer services, the biggest 5G revenue growth areas will come from enterprise services

The consumer market remains the CSP's bread and butter. But as they prepare for a changing consumer landscape, they are now looking to expand their offerings beyond these basic connectivity services. We found that enterprise services will be key revenue growth areas going forward with the top two 5G services being enterprise IoT services and Network-as-a-Service (NaaS) slicing services. This is followed by media and entertainment to form a consistent top four across regions and tiers.

Top 10 enterprise services driving 5G revenue growth

Connectivity services – data

Enterprise IoT services

Network slicing-based services for Enterprises, NaaS

Media and entertainment

New Edge-based applications/solutions

Consumer IoT services

Platform/marketplace services

Connectivity services – voice

Multi-access Edge Computing (MEC) as a service

Connectivity services – messaging

New business models take center stage

As CSPs look to grow their 5G revenue by expanding the services they offer to both their consumer and enterprise customers, they are also looking to new business models to support and drive this.

CSPs anticipate that 60% of new revenue will come through B2B2X models and not from the traditional B2B or B2C models. This will mean that partner ecosystems will become increasingly important and play a growing role in CSP revenue growth.
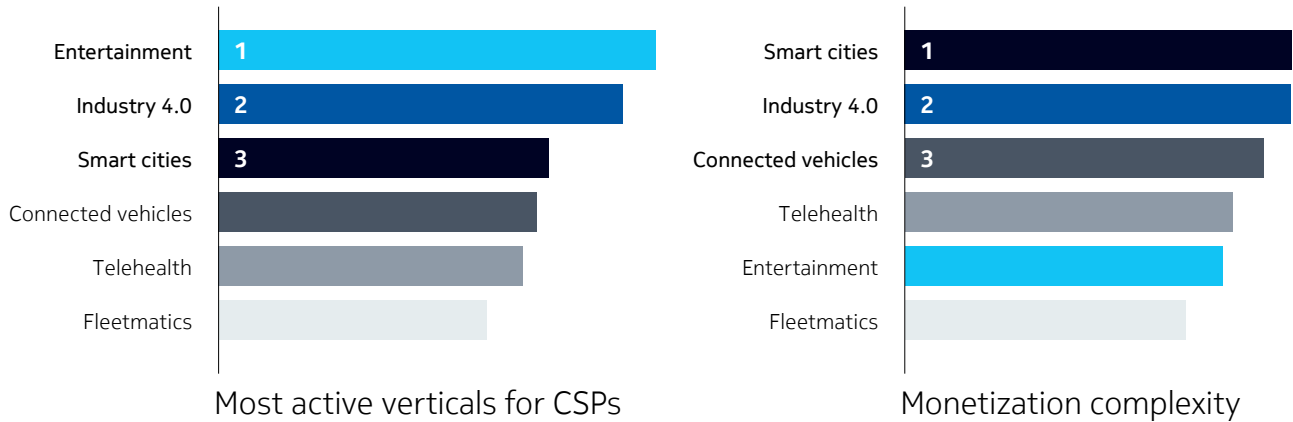
60%
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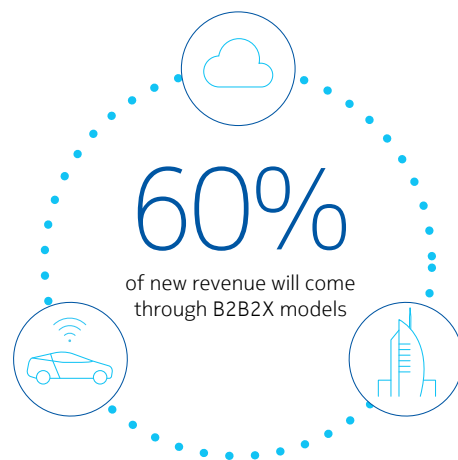
Business models driving 5G revenue growth

The monetization picture gets even more complex as CSPs seek new vertical growth opportunities

Two thirds of new enterprise opportunities will require an ecosystem of partners that CSPs will need to bring together and operationalize. These are also more complex from a monetization perspective, and require modern, agile monetization systems.

5G growth verticals

Most active verticals for CSPs
1 Entertainment
2 Industry 4.0
3 Smart cities
Connected vehicles
Telehealth
Fleetmatics

Most active verticals for CSPs

| Monetization complexity |
|---|
| 1 Smart cities |
| 2 Industry 4.0 |
| 3 Connected vehicles |
| Telehealth |
| Entertainment |
| Fleetmatics |

Monetization complexity

The impact of network slicing

In addition to supporting new partners, CSPs also want to be able to operate dozens and in some cases hundreds of slices.

The ability to orchestrate network slices adds a new level of complexity to monetization systems. CSPs need to be able to create these services easily and efficiently and then rate and charge for them using dynamic monetization models. Indeed, 65% of CSPs say they plan to pursue this in the next two years.

5G network slicing capabilities

65% plan to have a multi-slice 5G solution available in the next 2 years
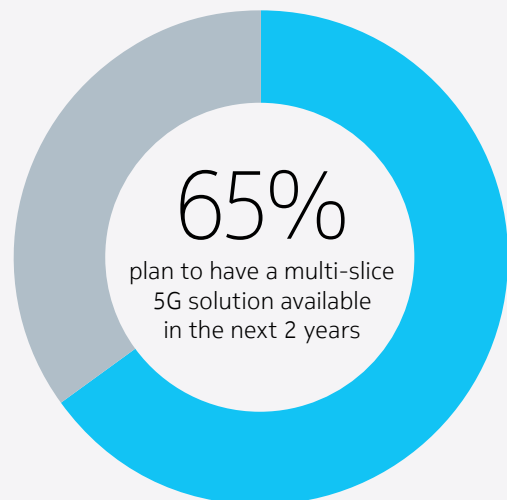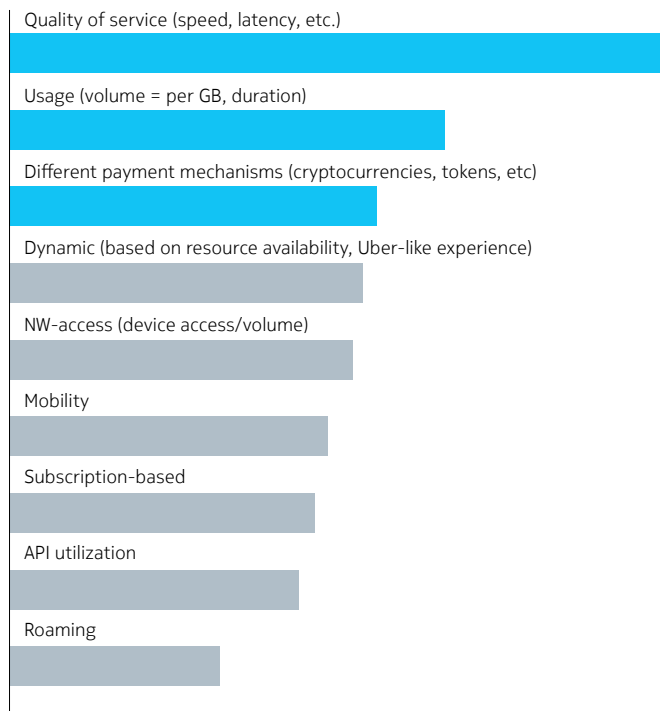
Preparing for new pricing models

Pricing plans and packages have always been a key element of how CSPs monetize the network. However, with the move in recent years toward a world of unlimited pricing plans, many CSPs have been unable to differentiate on price as they once did.

With the move to 5G, CSPs can now expect to offer new and innovative pricing models. The top two models are based on quality of service and usage-driven metrics made possible by the dynamic and highly automated nature of the 5G network combined with the network slicing capabilities.
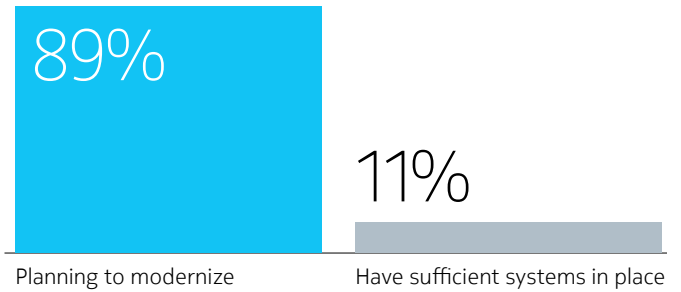
Future rating and charging models

Quality of service (speed, latency, etc.)

Usage (volume = per GB, duration)

Different payment mechanisms (cryptocurrencies, tokens, etc)

Dynamic (based on resource availability, Uber-like experience)

NW-access (device access/volume)

Mobility

Subscription-based

API utilization

Roaming

The will to invest

Existing monetization systems and platforms are unable to meet the needs of 5G and beyond, so CSPs are willing to invest and evolve.
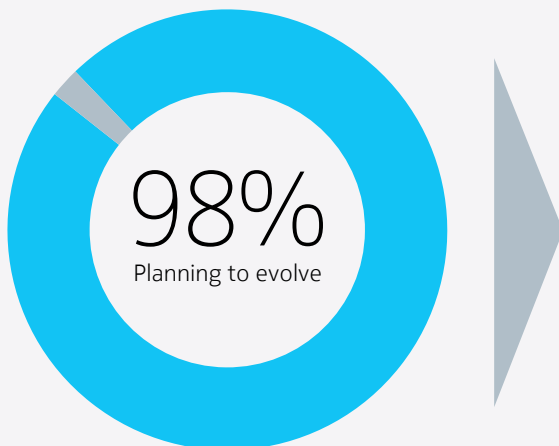
To effectively monetize the 5G network, CSPs need flexible, agile and scalable monetization systems that can quickly adapt and respond to changing enterprise and consumer needs. CSPs today don't feel their BSS is ready for this, with only 11% of respondents saying their existing BSS is sufficient to monetize 5G.
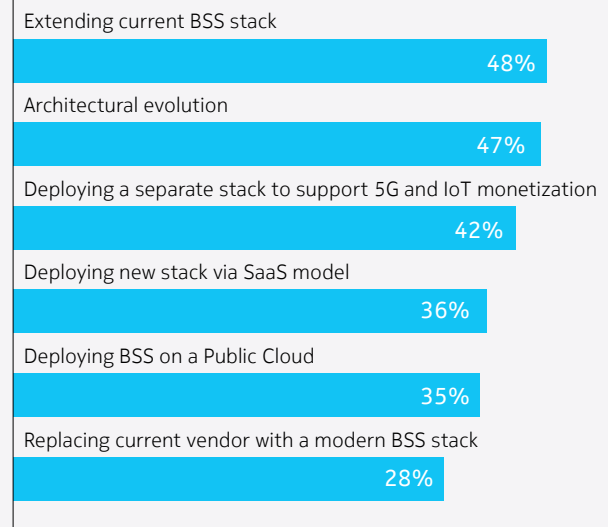
89%

Planning to modernize

11%

Have sufficient systems in place

Current BSS effectiveness

BSS evolution paths

We are planning on...

98%
Planning to evolve

Extending current BSS stack
48%

Architectural evolution
47%

Deploying a separate stack to support 5G and IoT monetization
42%

Deploying new stack via SaaS model
36%

Deploying BSS on a Public Cloud
35%

Replacing current vendor with a modern BSS stack
28%

CSPs also understand the importance of having 5G-ready monetization systems and the immediate investment that requires. Nearly all CSP respondents (98%) said they planned to evolve or extend their BSS over the next 5 years.

Two thirds of CSPs think real-time charging is essential for 5G monetization

When it comes to specific investment areas, two thirds of CSP respondents say real-time charging is the most important in terms of future 5G investments.

The charging engine is often seen as the heart of the CSP monetization system, so it makes sense that this would be the top area of investment in terms of priority. CSPs are prioritizing the converged charging system and this is consistent across regions and CSP tiers.

Future BSS investment areas

Real-time charging
1

Billing and invoicing
2

Customer Relationship Management (CRM)
3

eCommerce

Data mediation

Customer experience/engagement

Analytics and marketing tools

Marketplace

Partner management

Settlement and revenue assurance

It's time to move to the cloud

A cloud native architecture is key to achieving a 5G-ready monetization system. The benefits of a cloud native monetization system are necessary for CSPs to effectively react and meet the needs of their customers. We have found that the tide has turned and 70% of CSPs are now considering deploying monetization systems on the public cloud. This has many benefits including limitless scalability, an ideal platform for AI and analytics and edge compute capabilities for ultra-low latency use cases.

Monetization systems and public cloud

70%

Deploying BSS via public cloud is a viable option for us

North America

87%

Europe

57%

Asia-Pacific

65%
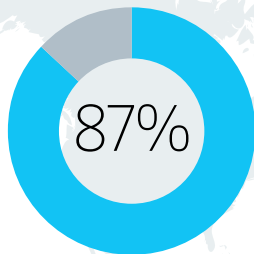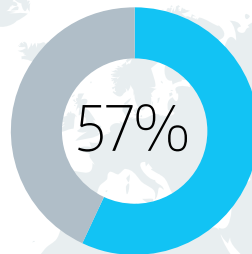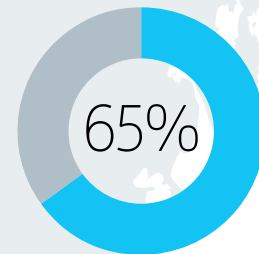
What's next?

We're still in the early days of 5G, so no one can yet predict the exact services or business models that will be successful. But whatever the result, CSPs need to be prepared with an adaptable monetization system that gives them the flexibility they need.

As CSPs evaluate their paths, we recommend CSPs:

- Invest in a modern monetization system that utilizes cloud-native, scalable and flexible infrastructure and open APIs for easy integration and deployment.

- Ensure they have the ability to launch new lines of business rapidly and easily without complex configurations.

- Create network exposure for partners and customers for joint innovation in building new services and solutions.

To support your journey to successful 5G monetization,
visit our webpage: **www.nokia.com/networks/portfolio/monetization**