Nokia Monetization Systems: Cloud based monetization of the 5G Economy
Cloud and the 5G economy
Communication Service Provider (CSP) spending on software and services will grow by eight percent until 2025. The main drivers of this growth are cloud and 5G with the two being inextricably linked. Cloud technologies are the foundation for much of the software that is required for a truly optimized 5G network. In the past moving applications to the cloud, whether private, public or hybrid, was viewed as a 'nice to have'. Now it has become a necessity in order to meet the business agility and scalability required to capitalize on the opportunities of the 5G economy.

1 - Analysys Mason - Cloud and 5G will be the dominant drivers of CSP spending [analysysmason.com]
The CSP journey to the cloud is not new, but it is complex

Many of the initial cloud deployments were done at higher levels of the stack, such as customer engagement systems, in order not to disturb the business continuity supported by some of the legacy, highly customized Business Support Systems (BSS), with their monolithic structures and proprietary APIs. As CSPs deepen their investment in migrating to cloud-native software applications, moving to cloud-native BSS is becoming increasingly important to ensure greater business agility. This is particularly true when it comes to efficiently monetizing 5G and capturing new revenue streams that 5G makes possible, including differentiated pricing, network slicing, and emerging service offerings, such as IoT and B2B2X, which require more flexible monetization models and scalability.
The 5G economy is driven by extremely high customer expectations

The 5G economy has led to extremely high customer expectations driven by **the digital economy and customers demanding simple, immediate and flexible experiences**. To meet these growing expectations, CSPs must continually engage and delight their customers with new services, enabled by agile and synchronized service and offer lifecycle management. End customers and CSPs will expect:

- Fast time to market for new digital services
- Simple, digital-first commerce with payment flexibility and transparency in quotation and billing
- Personalized and real-time contextual offers
- Fully automated and optimized delivery of complex services

These new digital services will be much more dynamic in nature, requiring CSPs to have the ability to instantly launch new features and scale up and down resources based on customer demand. Effective monetization of these will be essential to success and in order to achieve this CSPs need to ensure they have **modern 5G-ready monetization systems based on cloud-native technology.**
Monetization systems must support growing customer expectations

Monetization is essential for CSP success. CSPs must replace their legacy BSS systems to meet the needs and requirements of the 5G economy. 5G introduces a new network architecture and concepts that result in new imperatives for monetization systems including:

<table>
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<th>New revenue</th>
<th>Business agility</th>
<th>Operational efficiency</th>
<th>Flexible &amp; scalable</th>
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<td>Capture new revenue opportunities made possible by 5G capabilities; differentiated pricing, network slice monetization, flexible product offerings e.g. IoT, B2B2X</td>
<td>Empowering the business to support <strong>faster time to market</strong> to configure new services and offers, leveraging AI and automated decision making and reduced vendor dependency with open APIs and SDKs</td>
<td>Software architecture that reduces <strong>total cost of ownership</strong> at the massive scale of 5G; resource-efficient <strong>cloud-native</strong>, containerized microservices, a modular, distributed <strong>architecture</strong> reducing resource consumption and <strong>in-service upgrades</strong> and CI/CD</td>
<td>Configurable and adaptable to meet new 5G use cases and ability to <strong>scale rapidly</strong> to support volume and variety of transactions</td>
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A cloud native architecture is a key means to achieving a 5G-ready monetization system. With this come many of the associated benefits of cloud native architecture including reduced CAPEX and Time to Market and more scalability, agility and flexibility.

Specific capabilities enabled through cloud native monetization systems include:

**Limitless scalability**
The cloud provides limitless scalability for monetization systems, enabling CSPs to spin up instances on demand to support the needs of the 5G economy

**Platform for AI and analytics**
Due to the vast amounts of data that run through cloud platforms, they provide an ideal platform for AI and Analytics associated with monetization, that can contribute to dynamic pricing and usage pattern-based personalization

**Flexibility and agility**
Deploy highly modular charging services as Containerized Network Functions (CNF) to edge clouds or within a network slice in order to support low latency use cases and network slice monetization

CSPs who are looking to upgrade their monetization systems to ensure they are capable of scaling and meeting the needs of the 5G economy need to work with vendors who have the experience and technical capabilities to help them to do so.
Nokia’s innovative cloud charging solution available on AWS

Our cloud-native convergent charging solution, Nokia Converged Charging (NCC) is available on Amazon Web Services (AWS). The solution accelerates CSPs migration of business-critical, high frequency charging applications to the public cloud to deliver the benefits of the cloud for 5G.

**Built for the needs of the 5G economy**
As a containerized network function (CNF) built using AWS Well-Architected Framework, NCC provides true continuous availability, supporting the high frequency, low latency demands of an always on, real-time convergent charging system.

**Optimized for AWS deployments**
NCC features distributed deployment, active/active availability and geo-redundancy across regions specifically for AWS deployments.

**Tap into new revenue streams**
Enables CSPs to tap new revenue streams from 5G capabilities, including differentiated pricing, network slicing, and flexible product offerings, such as IoT and B2B2X.

At Nokia, we are at the forefront of building the innovative technology to support the digital transformation required by the 5G Economy.

Our offerings and integrated partner ecosystem allow you to chose the best solution for your organization.

Don’t delay in adapting to meet the needs of the 5G Economy.
To learn more about cloud based monetization, please visit: nokia.com/networks/portfolio/monetization
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We create the critical networks and technologies to bring together the world’s intelligence, across businesses, cities, supply chains and societies.

With our commitment to innovation and technology leadership, driven by the award-winning Nokia Bell Labs, we deliver networks at the limits of science across mobile, infrastructure, cloud, and enabling technologies.

Adhering to the highest standards of integrity and security, we help build the capabilities we need for a more productive, sustainable and inclusive world.

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