

Monetizing 5G: Unlocking Its Full Potential

This guide explores 5G monetization, including strategies, solutions, and new business models for generating revenue.



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What it Takes to Monetize 5G?

5G - the buzzword, the technology that will revolutionize connectivity.

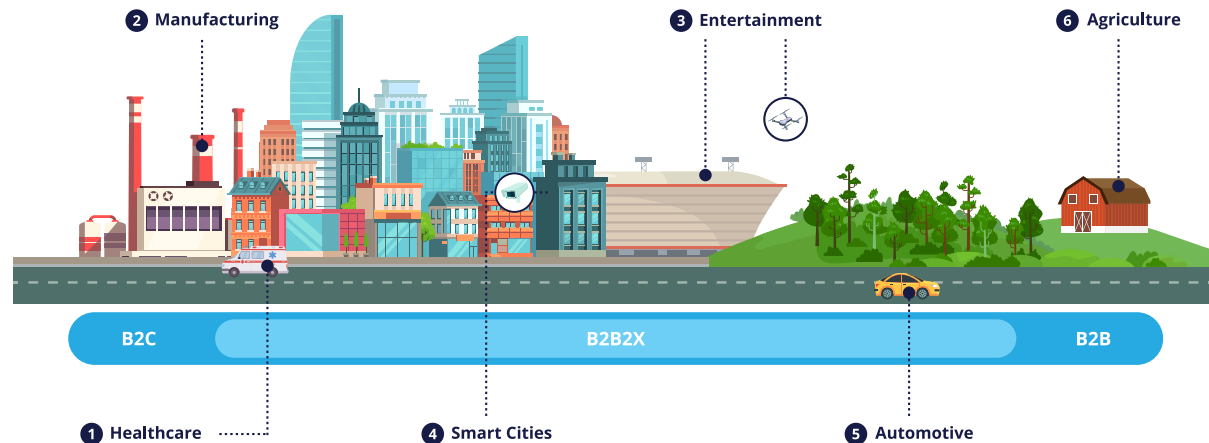
5G is the 5th generation mobile network that enables lightning-fast connection for virtually everything, from machines and objects to devices.

We all know the abilities of 5G, but the big question remains:

Will the Communications Service Providers (CSPs) monetize 5G, or will they repeat the missed chances of 4G implementation?

That is why insiders in the telecommunication industry are talking so much about 5G monetization.

What strategies and new business models can Telcos use to monetize on 5G?



Executive Summary

- ❖ 5G technology will revolutionize connectivity.
- ❖ The expectations from customers are high.
- ❖ According to predictions, 5G won't hit mass adoption, at least until 2025.
- ❖ 5G presents a big challenge for Communications Service Providers (CSPs).
- ❖ 5G technology offers excellent potential for monetization.
- ❖ Telcos need a 5G monetization strategy based on new services and products.
- ❖ 5G will be the driving force behind Industry 4.0. - the Fourth Industrial revolution and enable unprecedented productivity.
- ❖ To monetize on 5G, Telcos will enhance existing services and generate new products and services.
- ❖ Communications Service Providers (CSPs) must correct the mistakes made in 4G monetization.
- ❖ Network slicing is unique to 5G and presents great potential.
- ❖ 5G use cases will come in at least two stages.
- ❖ For successful 5G monetization, a modern BSS and Online Charging System (OCS) is a must-have.
- ❖ Public cloud BSS will replace on-premise billing systems.

We Utilize The Power of The Public Cloud BSS!

Unlock 5G potential. Let's do it together.



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Why Telcos Must Deploy 5G?

Telecommunication operators must deploy 5G technology because it is the future of connectivity, and any operator that doesn't adopt it will be left behind.

5G has become a buzzword, and users want it, even if they don't need it or can't fully utilize its potential.

To stay relevant in the digital age, communications service providers (CSPs) are shifting towards becoming digital service providers (DSPs).

With 5G, Telcos strive to deliver unprecedented connectivity and launch new market offers in a multidimensional open ecosystem.

Why is 5G important for Telcos?

With all the buzz created around 5G, customer interest is increasing.

For CSPs, this presents an opportunity to start monetizing and generating revenue with it.

5G technology provides capabilities that enable new use cases, applications, and business models that were not possible before.

By deploying 5G, Telcos can deliver high-speed connectivity and expand their market offerings in a multi-dimensional open ecosystem.

5G will significantly improve data transfer speeds, primarily impacting gaming, media, AI, security, transportation and healthcare industries.



What is 5G Monetization?

5G monetization refers to the various ways in which communication service providers (CSPs) can generate revenue from their 5G networks and services.

This can include **selling 5G services** directly to consumers, **charging businesses for access** to high-speed 5G networks or network slices, and **monetizing data** and other services enabled by 5G technology.

Some potential monetization strategies for 5G include offering enhanced existing services and creating new products and services that leverage the capabilities of 5G.

We pay to watch Netflix, Amazon Prime, or Youtube Premium and listen to SoundCloud or Deezer.

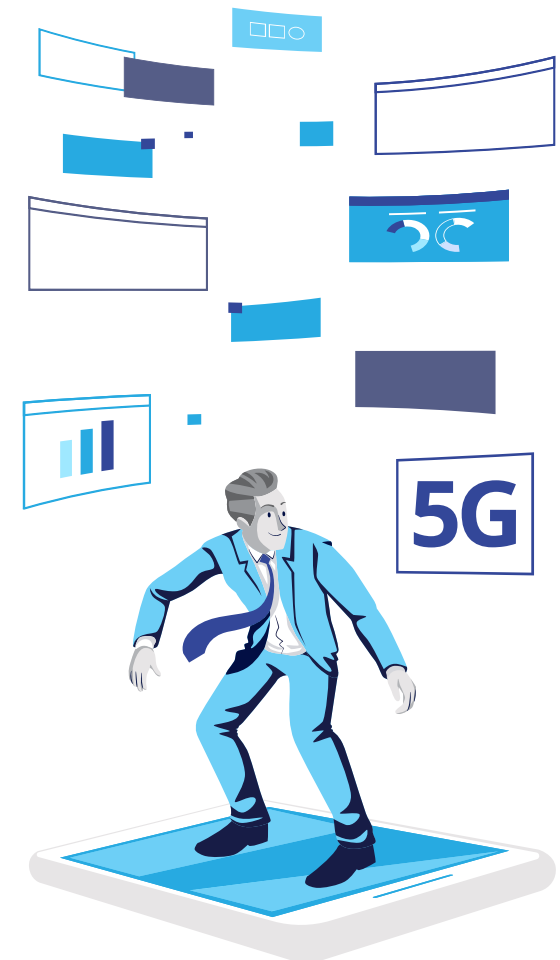
We pay subscriptions to Ubisoft or EA (Electronic Arts) to play games and use instant translators.

Many services, such as streaming, gaming, and AI (Artificial intelligence), will significantly benefit from 5G.

If consumers are willing to pay for these services, they will also be willing to pay for a fast and stable data connection.

Understanding the needs and expectations of their customers (B2C, B2B, and B2B2X) is crucial for Telcos to develop a strategy that works for them.

However, Telcos need a modern BSS and a business plan for monetizing 5G.



Key Features and Benefits of 5G

What distinguishes 5G from 4G and will enable this revolution everybody is talking about?

One of the most notable 5G innovations is **increased bandwidth** making 5G ideal for applications that require large amounts of data and support for many devices thanks to its **higher capacity** and lower power requirements.

However, 5G is still in the early stages of rollout.

That means limited coverage.

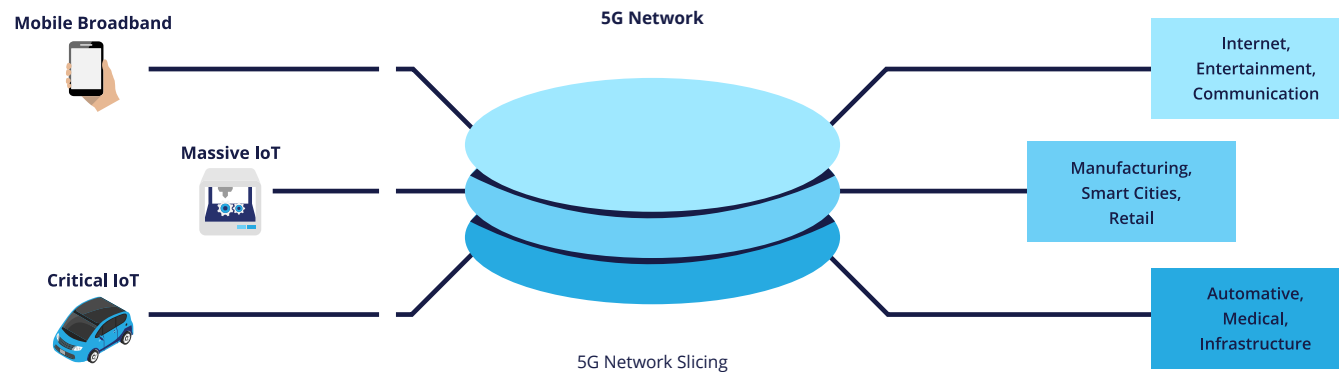
4G is currently more widely available and supports a broader range of devices.

Therefore, 4G is still the preferred choice for most people.

However, for those that need the highest possible speeds or lowest possible latency, 5G is the way to go.

5G revolves around three key technologies:

- ❖ **eMBB** stands for enhanced Mobile Broadband
- ❖ **URLLC** is short for Ultra-Reliable & Low Latency Communications
- ❖ **mMTC** means massive Machine-Type Communications



5G ultra-low latency

One of the most notable 5G benefits is its extremely low latency rate.

The latency is the time it takes for a device to receive a response from a network after sending a request.

5G networks can achieve latencies of **less than one millisecond**, which is significantly lower than the latencies of 4G networks.

5G monetization opportunities will arise from new and innovative 5G applications requiring **real-time responses**, such as augmented and virtual reality.

5G will **improve customer experience**, and enable new types of devices, such as connected cars and IOT devices like intelligent home appliances that will communicate in real-time.

5G higher capacity

5G higher capacity is one of the monetization opportunities.

It enables CSPs to generate new revenue streams and create new 5G use cases.

The 5G technology can support up to one million devices per square kilometer.

Therefore, it is the driving force behind the **Internet of Things (IoT)** concept and **Industry 4.0**.

Telcos can also use 5G higher capacity to offload data traffic from their 4G LTE networks onto their 5G networks.

This will free up the spectrum for other uses or improve the coverage and capacity of existing 5G networks.

5G network slicing

Network slicing is unique to 5G.

It enables the creation of multiple independent “on-demand” end-to-end logical networks.

They run on single physical network infrastructure and can be configured to accommodate **different quality of service (QoS)** requirements.

The basic idea of network slicing is to “slice” the original network architecture in multiple logical and independent networks.

Each slice’s capabilities, such as data speed, latency, security, and mobility are defined individually according to the demands of the particular service or use case.

What Do Consumers Expect from 5G?

Customers have high expectations for 5G!

They expect it to work quickly and without any issues.

They will not tolerate any lag in video calls or streaming, gaming, or other mobile data usage as they may have with 4G.

Additionally, if 5G is to be the foundation for technologies such as self-driving cars or remote medical procedures, there can be no room for error.

Customers expect 5G to revolutionize communication and interaction, and the telecommunication industry must deliver on its bold claims.

What do businesses expect from 5G?

Businesses have high expectations for 5G technology as it promises to generate significant revenue.

According to Juniper Research, global revenue from 5G services will reach \$600 billion by 2026.

In connection with the Internet of Things (IoT), 5G will be a driving force behind Industry 4.0 and the Fourth Industrial Revolution.

5G's will enable realtime communication, making it easier to connect with customers, partners, and employees in different locations.

Overall, businesses see 5G as a key driver of innovation.



Don't Repeat The Mistakes of 4G

Some other “4G mistakes” we can learn from were:

❗ The **focus on quantity over quality** is something we still see today.

CSPs tend to focus on getting as many customers as possible rather than providing a high-quality service to fewer customers.

❗ Some CSPs **lacked innovation** and didn't invest in new technologies or services that could have differentiated their 4G offering from competitors.

❗ Not all Telcos had **clear and transparent pricing**, and customers had difficulties comparing services to find which best suited them.

❗ Some companies should have **invested more in their network infrastructure** to prevent poor service quality and dropped connections.

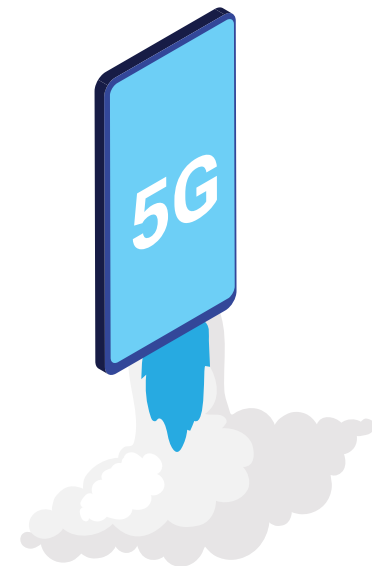
❗ The **lack of coverage** in rural areas resulted in a lack of adoption, dissatisfaction among the customers, and the loss of potential revenue.

❗ Many telecoms **didn't differentiate** their service, making it difficult for customers to choose between them.

When Telcos implemented 4G, most **didn't monetize** on it.

Instead, they offered 4G as an upgrade without charging for it or creating substantial additional revenue.

With 5G, Telcos now have the **opportunity to change that!**



5G Monetization Use Cases - Stage One

5G implementation will vary depending on the use case. The first stage will focus on ultra-fast data transfer and low latency via enhanced Mobile Broadband (eMBB) and Ultra Reliable & Low Latency Communications (URLLC) technology.

5G video calls & real-time streaming

5G's speed and low latency is ideal for real-time video transfer in high-definition and 4K.

Cloud gaming

5G's low latency and fast connection is perfect for cloud gaming, which is becoming increasingly resource-heavy.

5G internet and private networks

5G is debuting in ultra-high-speed broadband internet or Fixed Wireless Access (FWA), offering an alternative to traditional broadband access in suburban and rural areas.

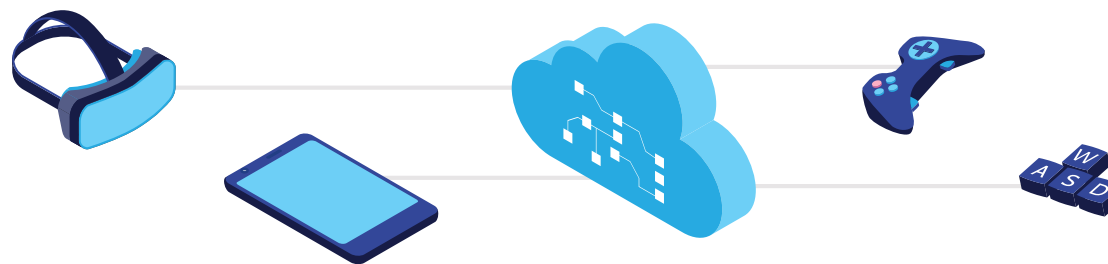
Instant language translations

5G's fast connection and data enable real-time text or speech translations, a traveler's dream.

Real-time AR

5G's low latency will enable real-time AR in gaming, industry, and sports events.

Telcos deliver ultra-high-speed broadband, and private 5G networks to areas where investing in classical infrastructure is not economically justified.



5G Monetization Use Cases - Stage Two

The second stage of 5G adoption will focus on services that require extreme reliability, low latency, and support a large number of connected devices and sensors.

🏠 Smart homes & 5G monetization

Smart homes will be equipped with smart-home (IoT) devices, appliances, smart meters, and sensors, all connected by a 5G network.

These devices will monitor, automate, optimize and protect every part of a home.

With the right 5G monetization strategy, utility companies and CSPs can launch new products and services.

For example, CSPs and utility companies can implement services like “pay-per-use” trash collection.

🏙️ Smart cities & 5G massive IoT

The term “Massive IoT” describes the enormous number of IoT 5G devices that will communicate with each other.

5G-powered smart cities will use IoT devices to **gather data** on everything from energy and water consumption to traffic patterns and public transport occupancy.

This data will be used to **make informed decisions** and plan infrastructure efficiently to improve city management, reduce costs and increase citizen satisfaction.

⚡ 5G & Smart energy grids

5G will revolutionize the energy industry by enabling real-time monitoring of energy production, equipment state and health, and energy consumption in smart cities and homes.

Smart grids using 5G-connected devices and sensors will improve forecasting, management, and efficiency and reduce costs.

Additionally, these smart grids will automatically balance the energy load and reduce peaks, making it easier to plan energy infrastructure.

Automotive industry & 5G

Self-driving cars are a highly anticipated technology.

How it will work? All traffic infrastructure will have sensors and devices that report everything happening in an area to a cloud-based system.

All vehicles will be connected to the cloud and will constantly report their real-time location, speed, intended destination, and more.

Cars will also be able to monitor their surroundings and communicate with other vehicles.

The requirement? A fast and extremely stable wireless connection that only 5G technology can provide.

Telemedicine & remote surgery

A futuristic but very real concept emerging is telemedicine and remote surgery.

It is a procedure where a surgeon remotely controls a robot that is performing the operation on-site.

The surgeon controls the robot remotely via augmented reality and IoT wearable AR goggles.

The success of this procedure, like with self-driving cars, relies on the speed and reliability of the connection, which is made possible by 5G.

Telemedicine and remote surgery will allow specialists to perform surgeries anywhere in the world.

5G in agriculture

5G will greatly impact agriculture by implementing “precision agriculture” through 5G-powered sensors.

They will measure soil properties, weather, livestock health, crop characteristics, and more.

This data is analyzed in the cloud to help farmers make informed decisions on planting, fertilizing, irrigation and harvesting.

5G will also enable autonomous agricultural vehicles, such as drones, for monitoring and spraying.

The goal of precision agriculture is to optimize output while minimizing costs.

How Telcos Can Monetize on 5G?

5G is not a product but a technology!

To monetize on 5G properly, Telcos should offer more than just connectivity.

Communication Service Providers must offer innovative 5G cloud-based services and form partnerships with companies that provide new services or those enhanced by 5G technology.

With the Internet of Things (IoT) and the right partnerships, a whole new area of potential customers in the B2C, B2B, and B2B2X segments is emerging.

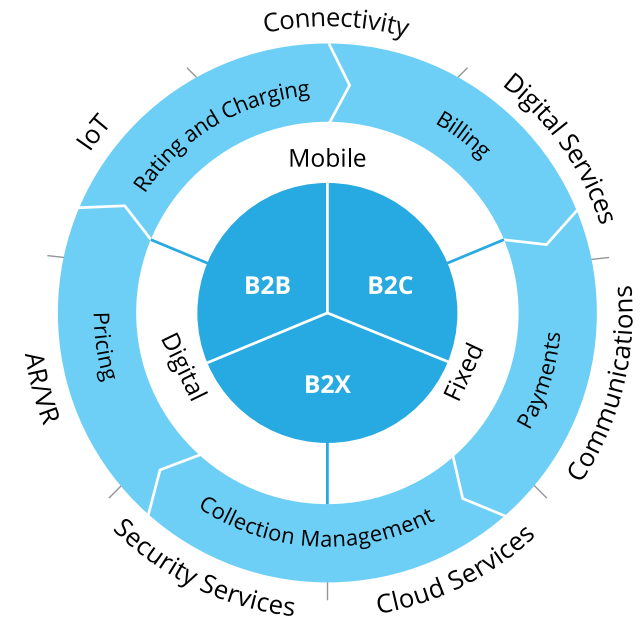
The key to successful 5G monetization lies in consumer education, diversification, and pricing.

Customer education about 5G

Educating consumers on the benefits and unique features of 5G and products and services is essential, or it can lead to the misconception that 5G is simply a faster version of 4G.

Studies show that consumers will pay more for 5G services if they fully understand the advantages.

In fact, a survey from Nokia showed that **80% of consumers familiar with 5G will pay more for 5G services**, compared to only 23% of those unfamiliar with it.



Diversify yourself

To **avoid pricing wars**, telcos must diversify their offerings and focus on providing specific customer experiences.

Partnerships with companies offering high-quality products enhanced by 5G are a great way to achieve this.

A Telco can act as a connectivity provider while partners market their catalog of products and services.

To find suitable partners, Telcos should look for companies with **strong brands** and good customer relationships.

The most beneficial partnerships are with companies that offer multiplayer cloud gaming, video streaming, and augmented reality products.

Additionally, Telcos should consider partnerships with smart devices and IoT producers, as these devices can greatly benefit from 5G technology.

5G monetization strategy and pricing

Customers are **sensitive to pricing** regarding 5G technology since they are generally satisfied with their current broadband and mobile connectivity.

Therefore, it's essential for Telcos and other providers of 5G services and products to explain why they should pay extra for "premium" 5G connectivity.

To effectively monetize 5G, Telcos need good pricing strategies and personalized offers so that the customer gets what he requires without paying for what he doesn't use.

One solution is **network slicing**, which enables Telcos to offer different quality of service (QoS) to users sharing the same physical network.

Additionally, Telcos can offer the option for customers to upgrade their network performance on demand with a pay-per-use model rather than a standard monthly subscription.

With 5G and network slicing, there are almost no limitations to creativity in pricing and 5G monetization business models, as long as Telcos have the appropriate charging and billing software to support it.



Challenges of 5G Rollout Strategy

i Market and timing

Choosing the right market and timing for a 5G rollout is crucial. 5G may fail in markets with strong infrastructure or a lack of consumer interest.

Telcos must be realistic about consumer needs and willingness to pay for new technologies.

i Competition

Telcos must study the competition and develop strategies to differentiate themselves to attract customers.

The key is to create unique 5G products and services and offer the best customer service, pricing, and network coverage.

i Regulatory challenges

Telcos face different market regulations and compliance demands from local laws and regulations.

Implementing them can be a complex and time-consuming process and affect the rollout's speed, costs, and success.

i Costs and investments

Building 5G infrastructure and networks require significant investment.

Therefore, carefully plan and budget for these costs and the cost of developing new 5G-enabled products and services.

i Security & Trust

Like any new technology, security and trust play a significant role in decision-making.

Telcos must show a high level of security and capability to get the customers to trust and adopt this new technology.

i Device availability

For now, only a limited number of devices on the market support 5G. It's a fact that plays a major role in the 5G rollout.

That is why device availability plays a crucial role in the speed of 5G adaptation.

Monetization and “5G-ready” BSS

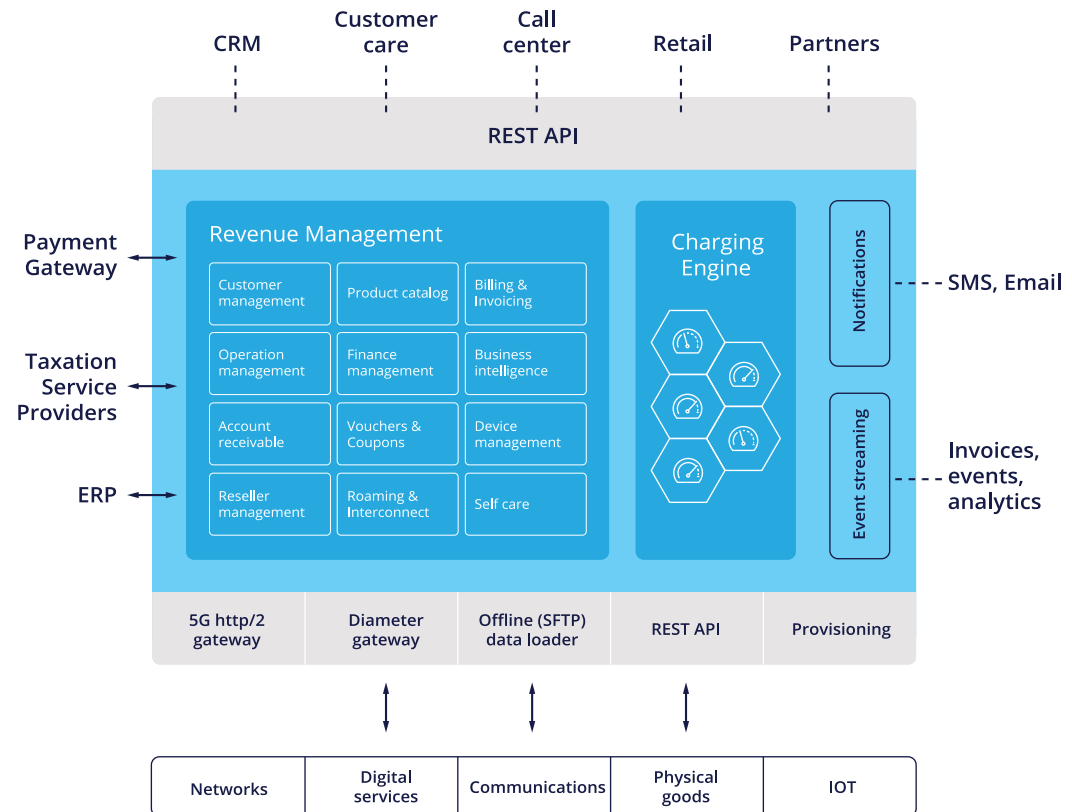
CSPs already use advanced billing systems for current operations, however, they may not be able to support new opportunities and business models that 5G brings.

New 5G services bring new requirements in the form of real-time charging and billing.

Together with the demand for integration with new technologies like IoT or VR and increased security, 5G services also require personalized and customizable plans and multi-device and multi-network support.

Converged billing BSS and Online charging systems (OCS) are crucial for monetizing new 5G services and a smooth migration from 4G to 5G.

CSPs that implement such “5G-ready” systems will be in a better position to monetize 5G opportunities.



Extreme Performance with High Throughput and Low Latency

In 5G billing systems, extreme performance is achieved through the combination of high throughput and low latency, enabling rapid and reliable processing of customer transactions.

High throughput is the ability of the system to process a large volume of transactions quickly.

Low latency refers to the time it takes the system to respond to a request.

To achieve **extreme performance** in 5G billing systems, the software is optimized to minimize processing overhead and reduce response times.

Implementing advanced algorithms, such as sharding and indexing, is also used to improve performance by reducing the amount of data that needs to be processed for each transaction.

The importance of No code and API first design

No code design enables people in the business functions to apply changes to the software with no coding required.

By doing so, it allows faster iterations and significantly accelerates time-to-market.

It also reduces the time, risk, and costs of experimenting and implementing new business models or processes.

REST API-first design enables seamless integrations with other systems and services.

It makes the system more flexible, efficient and secure and above all, it improves scalability.

Together, no code and API first design can significantly speed up development and make it more flexible and efficient.

Benefits of Converged BSS and OCS

- ✦ **Increased revenue** from new services and use cases enabled by 5G technology.
- ✦ **Improved efficiency and administrative cost reduction** by automatizing the billing and charging processes.
- ✦ **Better control over revenue** with detailed usage and revenue data and a better understanding of customer behavior.
- ✦ **Improved customer experience** with up-to-the-minute information on their usage and charges.
- ✦ **Increased security** with secure payment methods and encryption technology that protect sensitive customer information and prevent fraud.
- ✦ **Enhanced flexibility and competitiveness** with the ability to quickly and easily launch new services and pricing plans.

Public Cloud BSS 5G Monetization Systems

Simply moving an on-premise BSS to the public cloud does not qualify as “cloud-native” or gives you any significant benefits.

In many cases, such shift can even result in increased costs for running.

The true strenght is in a ready-to-use public cloud-based BSS solution!

We bring the BSS platform to you and unlock all the benefits.

✓ **Faster Time-to-Market**

Choosing a public cloud BSS solutions eliminates the need for a long implementation process and reduces the time it takes to bring new services and products to market.

✓ **Innovation**

Public cloud BSS providers are at the forefront of innovation.

We bring you new features and functionalities faster than traditional on-premise BSS solutions.

✓ **Reliability & Maintainance**

Enjoy high availability and reduce downtime.

Let your provider take care of all the maintenance and upgrades and free your IT teams to focus on other tasks.

✓ **Flexibility**

A BSS in the public cloud can be accessed from anywhere, making it ideal for organizations with multiple locations and employees working remotely.

Tridens Monetization runs on AWS (Amazon Web Services) public cloud.

✓ **Advanced technologies**

Machine learning, artificial intelligence, big data analytics, and the Internet of Things (IoT) can enhance offerings and improve customer experiences.

These technologies allow providers to analyze vast amounts of data in real-time and make informed decisions, automate processes, and provide personalized experiences or predict customer behaviour.

✓ Scalability

A public cloud BSS is easy to scale up or down according to changing business needs.
You only use what you need!

✓ Security

We invest heavily in security measures to protect your customer data and reduce the risk of security breaches or data loss.

✓ Cost-Effectiveness

Eliminate the need for large capital expenditures and reduces the costs of maintaining and upgrading hardware and software.





Monetize Your Business with Tridens Monetization



+15 Years



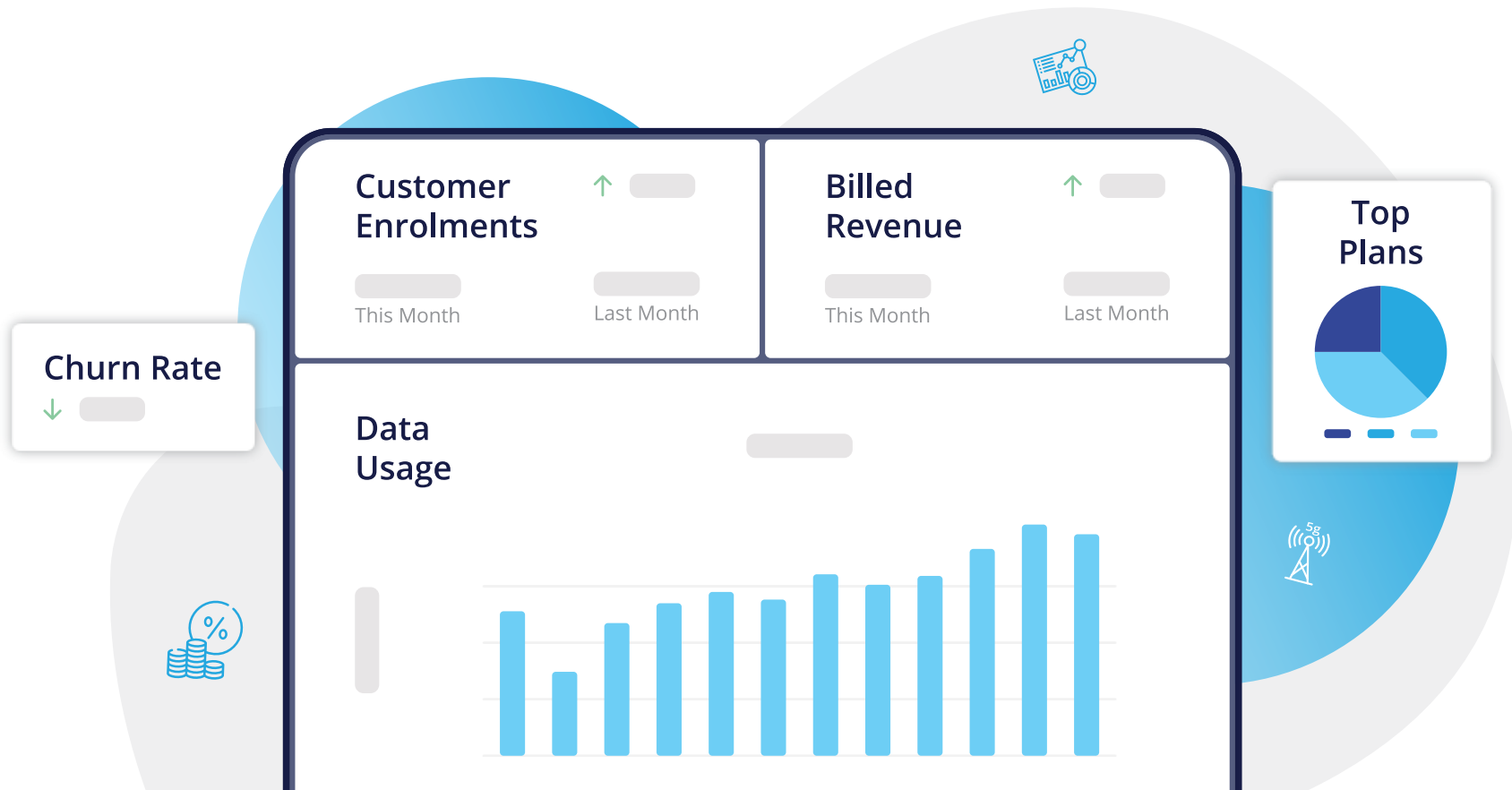
+100 Specialists



+150 Clients



+30 Countries



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