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UNLOCKING B2B2X MONETIZATION WITH PARTNER-CENTRIC PLATFORM

THE PLATFORM WILL ENABLE CONNECTIVITY
SERVICE PROVIDERS TO MONETIZE 5G
ENTERPRISE DIGITAL USE CASES.

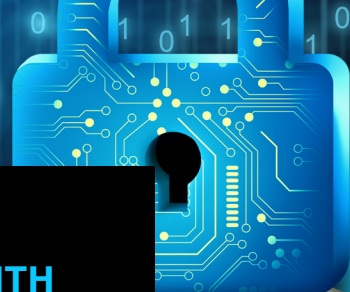


Table of Contents

- 1. Executive summary** 3
- 2. Revenue opportunities from B2B2X** 4
- 3. Challenges to address these opportunities** 7
 - 3.1 Traditional BSS is rigid 7
 - 3.2 Cloud native PaaS Flexibility to onboard best-of-breed partners 8
- 4. Flexible marketplace** 9
 - 4.1 Benefits 10
 - 4.1.1 Monetize any use case 10
 - 4.1.2 Quicker go to market 11
 - 4.2 Features 12
 - 4.2.1 Partner ecosystem 13
 - 4.2.2 Enterprise monetization 14
 - 4.2.3 International settlements 15
- 5. Select use cases** 15
 - 5.1 Smart agriculture 16
 - 5.2 Connected healthcare 17
 - 5.3 Smart airport 17

Conclusions



UNLOCKING B2B2X MONETIZATION WITH PARTNER-CENTRIC PLATFORM

01

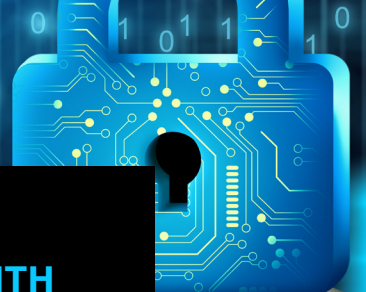
Executive summary

Connectivity service providers (CSPs) have faced a complex equation: remain profitable during declining consumer voice and data revenues while they invest in the capital-intensive spectrum and capital expenditure (CapEx). Although the consumer market will always be a significant source of revenue, operators must quickly identify additional sources to pay off their 5G and cloud investments and start making a return.

5G promises to unlock new business opportunities among enterprises for digital transformation. To monetize this emerging B2B2X opportunity, CSPs must break from their tradition of simply selling connectivity and provide highly specialized solutions in partnership with best-of-breed players.

"5G promises to unlock new business opportunities among enterprises for their digital transformation."

It is a new ball game where CSPs must adopt new methodologies and technologies. To achieve use-case delivery across a complex chain of participants, CSPs need a B2B2X scalable, partner-centric BSS platform. This paper presents the features and benefits of an agnostic use-case platform. We make the case that CSPs will only successfully monetize 5G services if they use open and scalable cloud-based solutions.



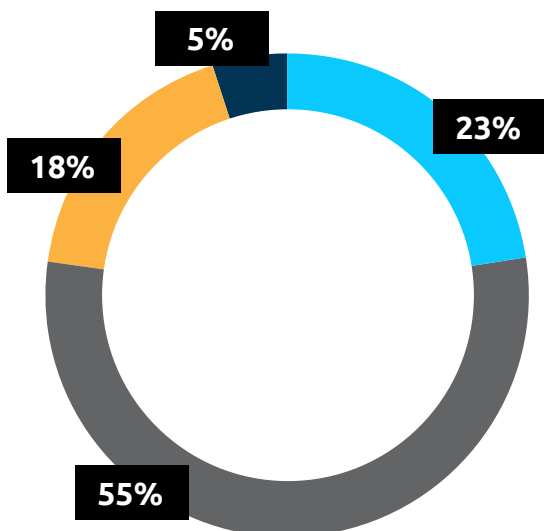
02

Revenue opportunities from B2B2X

The GSMA reported that [5G networks](#) had been deployed in more than 70 countries by nearly 200 operators, covering almost one-third of the world’s population. While the new standard dramatically improves throughput and latency, few consumers will pay more for 5G connectivity, perhaps outside gaming. [McKinsey research](#) indicates that two-thirds of customers are unwilling to pay more than 5 euros per month for ten times higher speed.

The actual revenue opportunities for 5G come from the enterprise segment, where connectivity is the foundation that enables industries to execute their digital transformation. 5G introduces new use cases and enhanced capabilities, such as network slicing and massive IoT, that will support numerous use cases and revenue streams. Industry analysts predict that by 2025, B2B revenue will represent about half of the average CSP’s revenue.

How much do you think on average a 5G operator's revenue will come from 3rd-party partnerships by 2025?



- Less than 10% 23%
- Less than 10% 55%
- Less than 10% 18%
- Greater than 50% 5%

Source: Telecoms Intelligence Annual Industry Survey 2021 Report



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B2B2X refers to a CSP's (B) contract services with businesses (B2B), which may or may not own the final business relationship with customers (B2B2X). In the 5G era, the service provider, as the first B can make it possible for the end customer (X) to experience a service without owning all components of that service or the direct customer relationship. This means the end customer—business or consumer—can contract with new companies directly without considering its association with a CSP. The supported use cases make CSPs indispensable in the relationship.

A considerable portion of the 5G enterprise opportunity lies in IoT applications supporting use cases such as fleet telematics, Industry 4.0 manufacturing, smart cities, and telehealth, to name just a few. Many operators already serve those applications with 4G, but they have only scratched the surface regarding the value they can enable.











To maximize IoT revenue and margins, operators should partner with companies with customer relationships in specific enterprise verticals, where they understand the unique requirements and are recognized as domain experts in their field. Other potential partners include startups disrupting those verticals with solutions so innovative that end users sit up and take notice. These partners include systems integrators specializing in specific applications, such as security/surveillance camera networks, or specific markets, such as health care. Another type is vendors that specialize in hardware, software, and services for verticals, such as fleet management, mining, and oil/gas refining.



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Select B2B2X use-cases:

Enterprise ■ Retail ■

	Enterprise	Retail
 Mobility & Public Transport	<ul style="list-style-type: none">Autonomous Driving	<ul style="list-style-type: none">Remote monitoring of infrastructureReal time traffic Management
 Public Safety	<ul style="list-style-type: none">HD Real time video Surveillance	<ul style="list-style-type: none">Improved disaster Alert and responseVulnerable road user (VRU) discovery
 Healthcare	<ul style="list-style-type: none">Telemedicine and rehabilitation	<ul style="list-style-type: none">Remote patient MonitoringConnected Ambulance
 Energy & Utilities	<ul style="list-style-type: none">Smart Grid	<ul style="list-style-type: none">Intelligent TrafficVirtual Power Plant
 Media & Entertainment	<ul style="list-style-type: none">4K/8K Mobile Streaming	<ul style="list-style-type: none">Smart StadiumVirtual Reality Multiplayer Games
 Education	<ul style="list-style-type: none">Virtual Reality/ Augmented Reality	<ul style="list-style-type: none">Remote Tutoring/ LearningVirtual Classrooms
 Industry & Agriculture	<ul style="list-style-type: none">Extended IoT and M2M	<ul style="list-style-type: none">Autonomous PlantDrones in agriculture and maintenance
 Tourism & Retail	<ul style="list-style-type: none">Augmented Reality Guided tours	<ul style="list-style-type: none">Automatic delivery Robots and dronesVirtual reality visits

Source: Optiva

CSPs that build mutually beneficial relationships with enterprises will be rewarded with improved market valuations and brand recognition. CSPs also look at other areas to bring value to enterprises, including network-as-a-service (NaaS), edge computing, Software-defined Wide Area Networks (SD-WAN), and analytics.

As we will see in the following sections, CSPs must change how they define, procure, and support their business systems to capture a good portion of the value creation.

03

Challenges to address these opportunities

To capture the 5G value for enterprise services, CSPs must adapt their legacy BSS to the levels of agility required in this diverse, fast-changing landscape.

3.1 Traditional BSS is rigid

CSPs have spent decades and fortunes building Business Support Systems (BSSs) that can no longer support the following 5G revenue opportunities. Most CSPs have rigid and complex BSS cobbled together over decades using components from multiple vendors. These hodgepodge legacy systems make it time-consuming and expensive for B2B2X partners to perform various tasks, especially for CSPs in emerging countries where systems to support enterprise applications have yet to be modernized as much as in developed markets.

Analysys Mason research shows 61% of SMBs (i.e., small and medium-sized businesses) want access to transparent and commercial engagement from their CSPs and the ability to track spending and usage in real time. The lack of flexible payment terms and support for consumption-based models, such as pay-as-you-use, is also a problem with legacy systems. Other issues with legacy BSSs include:

Siloed architecture and monolithic, tightly coupled applications

Continual customizations and workarounds that result in ballooning complexity

On-premises approach that leads to low scalability and elasticity

Multiple platform vendors with proprietary technologies

Undocumented interdependency between functions and systems

CSPs need help deciding which portions of the BSS they want to modernize. It is also expensive to maintain cumbersome systems because it means diverting limited resources from necessary upgrades or replacements.



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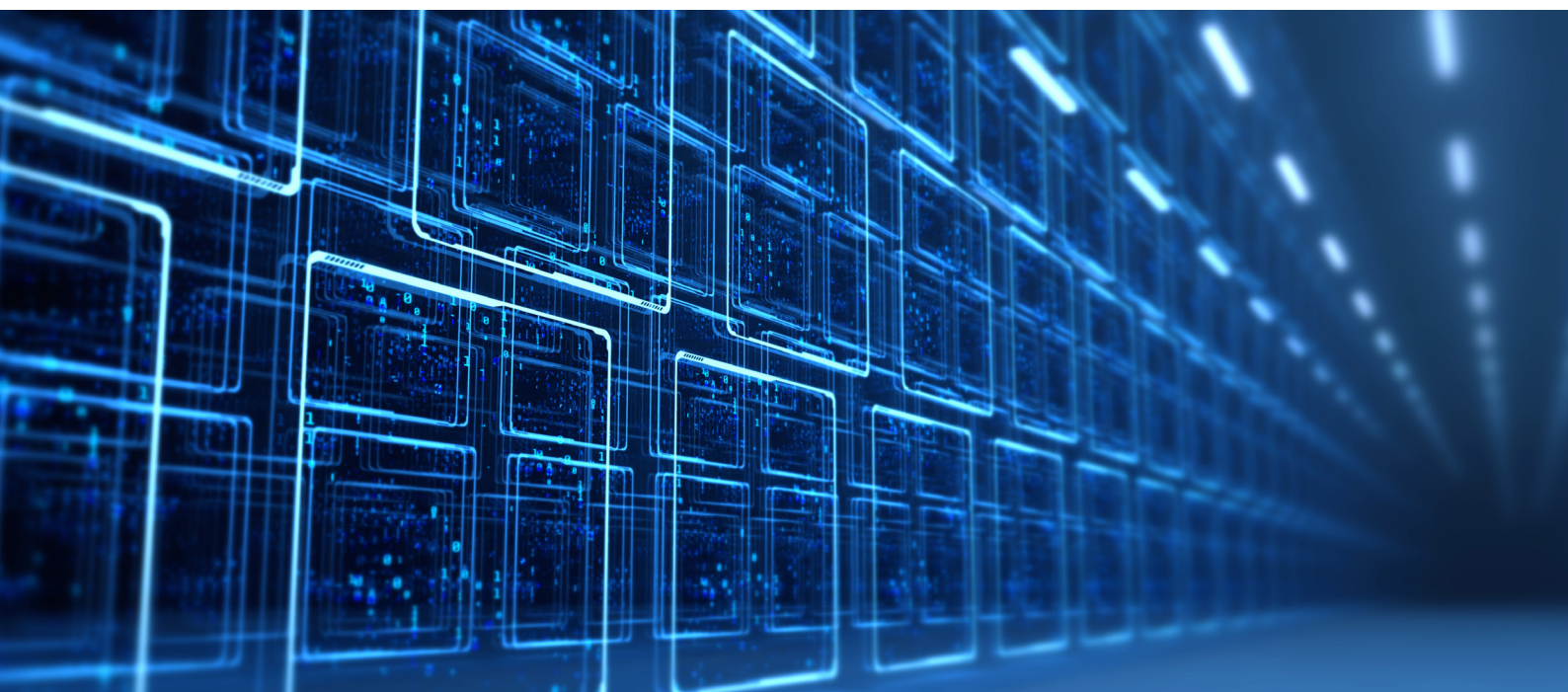
3.2 Cloud native PaaS Flexibility to onboard

Legacy BSSs are rigid, expensive to build and maintain, and require significant human intervention. The cloud-native platform as a service (PaaS), available on public and private clouds, allows CSPs to automate back-end processes, which results in faster deployment and cost reduction. For example, a cloud-native BSS can dynamically provide a unified charging platform to a customer with various services.

To maximize these opportunities over public networks, CSPs need to upgrade their Operations and Business Support Systems (BSS/OSS) and analytics capabilities to provide the required quality of service (QoS) and demonstrate associated service level agreement (SLA) compliance.

There will also be an overlap with private networks through network slicing, which allows operators to carve out virtual segments of their networks to emulate private network security and guaranteed capacity, or alternatively, underpin SLAs for specific applications or services, especially off campus.

CSPs need BSSs that support expanding or reinventing their core business, developing an ecosystem of partners to support innovative use cases, and providing customized customer experiences.



04

Flexible marketplace

According to author [Tom McFadyen](#), “Marketplaces are a type of platform that promotes and enables transactions between multiple parties, such as a customer and a third-party seller. Marketplaces generally do not fulfill the products or services purchased. Marketplaces generally charge fees for enabling the transaction.”

As proven by the immense success of Amazon, marketplaces are necessary because a single entity cannot deliver all the solutions customers need without contributions from specialized partners.

According to a survey by the TM forum, CSPs and their suppliers define marketplaces differently. Forty percent view marketplaces as B2B2X portals where they sit at the center selling services. At the same time, 35% see it as a digital self-service portal hosted by a neutral third-party marketplace provider through which multiple CSPs and ecosystem partners can offer connectivity, comms-related services, apps, devices, and content. In general, CSPs are motivated to “own” the customer or at least maintain some control over the customer relationship. Based on the survey results, the bottom line is that CSPs need to onboard and manage partners quickly and easily with proper order capture, customer relationship management, and billing.

4.1 Benefits

In the context of this paper, a digital marketplace is a partner enablement platform that allows CSPs to design and create service offerings that serve cross-industry use cases by combining their services with partners’ portfolios. Those products and services include hardware, software, cloud storage, network slicing, network security, and data analytics. The result is a greater number of personalized services by CSPs.



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4.1.1 Monetize any use case

The results of a recent survey by Analysys Mason show that CSPs consider digital marketplaces and advanced partner settlement models to be crucial when participating in the B2B2X value chain and are prioritizing their development.

CSPs should also plan to transform their enterprise-focused systems within the next two years to reduce the time to market, support flexible commercial models, lower commercial risk, and reduce operational costs.

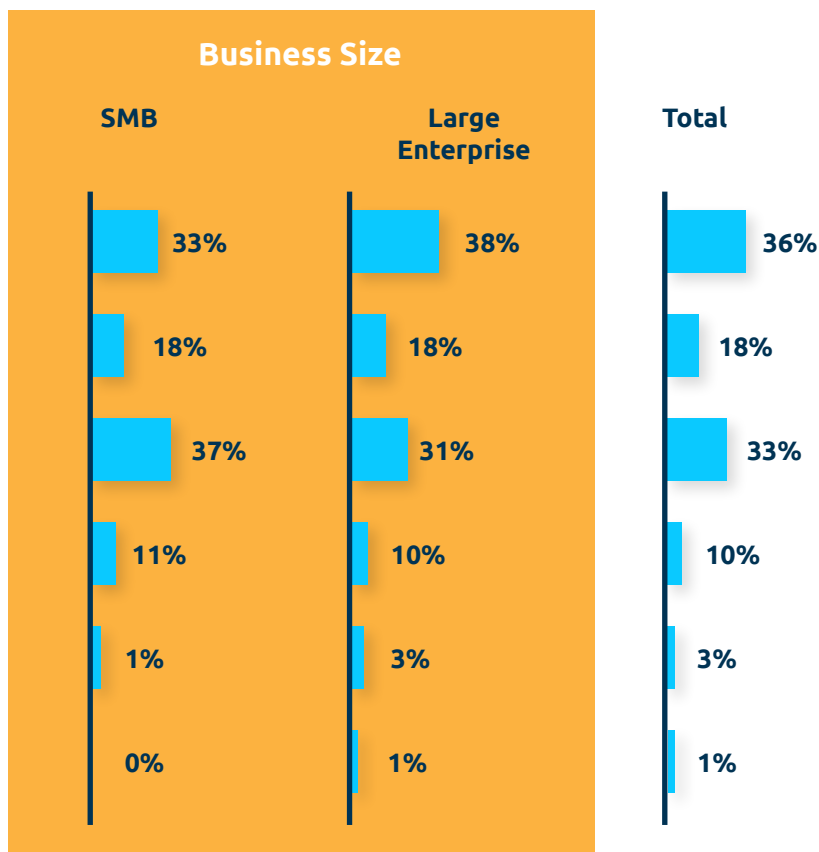
4.1.2 Quicker go to market

While 5G enterprise services represent big opportunities for CSPs, the lack of clarity and experience in emerging enterprise use cases is challenging. CSPs need to define and procure B2B2X, edge computing, SD-WAN, and NaaS without the detailed specifications and time budget previously expected.

According to Analysis Mason research, CSPs consider digital marketplaces and advanced partner settlement models crucial to participation in the B2B2x value chain and are prioritizing their development. Enterprises plan to launch 6–25 new offerings by 2024 that require agile commercial models. Enterprises also plan to increase their spending with CSPs during this time, provided that CSPs are prepared to offer flexible commercial models. A flexible marketplace must thus empower CSPs to quickly launch services with few partners and then scale easily when a market fit justifies adding more partners and services.

Enterprises' preferred suppliers for current and planned ICT services, worldwide, December 2021





Note: Question:
“Looking ahead and thinking about current and planned ICT services, who will be your preferred main supplier? (CHECK ONE)”; n = 309.

Source: Analysis Mason, 2022

Now that some of the benefits of a flexible marketplace have been established, what are some of the key features of a partner-centric platform to be showcased?

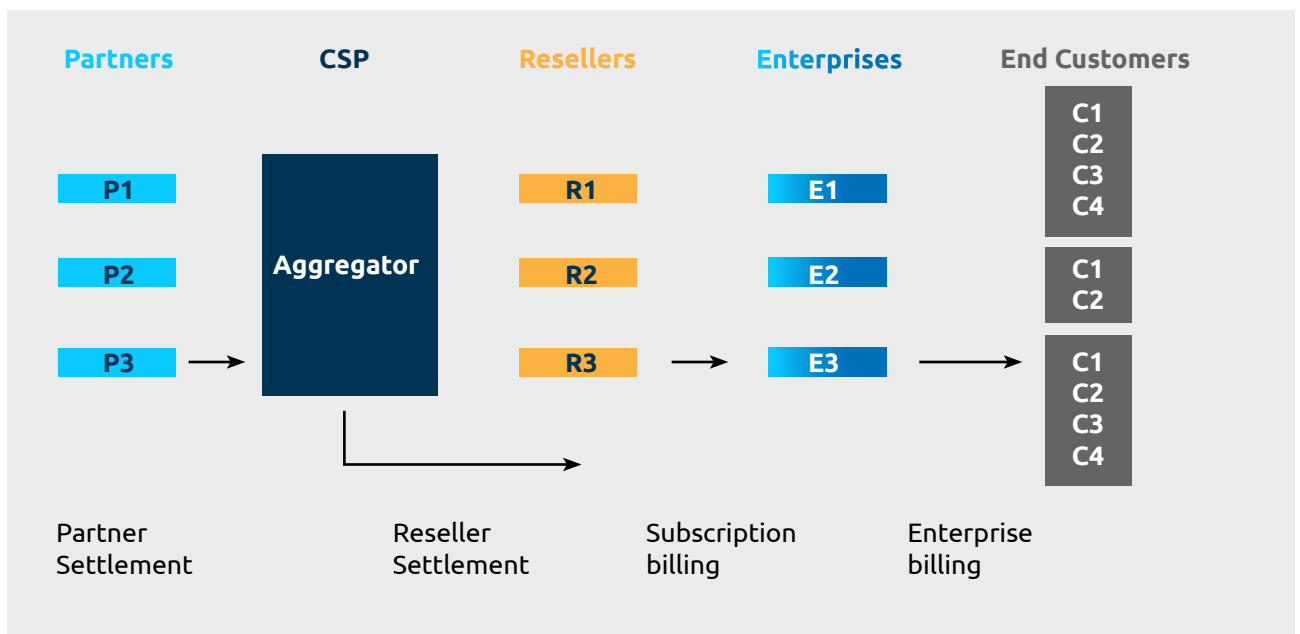
4.2 Features

Developing a successful B2B marketplace is related to CSPs’ digital transformation to support new enterprise capabilities.

4.2.1 Partner ecosystem

The partner-centric platform is a dynamic online charging system with standardized plug-and-play APIs to create a true revenue-generating partner ecosystem. The open architecture enables third-party solutions to be part of the service portfolio and to become monetization opportunities.

B2B2x Settlement Flow



Source: Optiva

CSPs must build a marketplace that involves wholesale operators, software developers, public cloud providers and value-added resellers. CSPs will then bundle their offerings with those of their partners. The partner-centric platform provides an abstraction layer between northbound IT systems (e.g., customer engagement systems, billing platforms) via open APIs and southbound cellular network core environments via Diameter interface.

The abstraction layer creates the foundation to support onboarding partners for enterprise, IoT, Industry 4.0, and private network opportunities. Moreover, the platform is technology and use-case agnostic, and offers the same monetization solution to support services and provided over any radio access network or specialized service.

4.2.2 Enterprise monetization

A B2B2X-friendly BSS also will enhance the value of 5G capabilities. For example, Massive Machine-Type Communications (mMTC) enables 5G networks to support up to 1 million devices per square kilometer. That scale means that partners must be able to activate and provision those devices in batches of hundreds or thousands, such as in the case of IoT sensors and controllers.

Developing a successful B2B marketplace goes hand in hand with CSPs digital transformation to support new enterprise capabilities. The platform must be able to support the following features:

Combine CSP product catalogue with those of ecosystem partners to deliver relevant and personalized offerings

Automate client onboarding, fulfilment, and assurance capabilities to accelerate the concept-to-revenues cycle

Deploy cloud-native, microservices-based architecture with open APIs to ensure interoperability between CSPs and ecosystem partners

Introduce partner relationship management systems to support a multidimensional partner

Build an ecosystem that can interact and transact across industry verticals and regions

Implement revenue management systems with real-time billing, charging, and multiparty settlement capabilities to manage complex payment processes

Provide flexible payment options

It is essential that charging capabilities and billing models are flexible to support several billing models — including subscription on demand.

4.2.3 International settlements

Because the marketplace is cloud-based, it may include suppliers from around the world, which has foreign exchange and tax implications for settlements. CSPs need a platform that will integrate those aspects in their billing and settlement processes quickly and seamlessly. Ensuring partners get paid will promote trust and encourage collaboration..



Enterprise Engagement - 360

Track Partner Performance
Single Point of Management
360 Degree View

Reseller Marketplaces
Multi Business Profile
Customer Account

Open APIs
Configurable Attributes



Partner Ecosystem

Digital Partner Onboarding

Partner Offering Onboarding

Partner Self Service

- Order Management
- Inventory Management
- Fulfillment Service - Shipping
- Customer Support

Contact Services

- Legal Service - KYC
- Security & Compliance Policy



Digital Marketplace - Enterprise Store Front

CPQ

- Dynamic Product Catalog
- Multi SKU Product Bundeling
- Content Management System
- Up-Sell and Add-on
- Promotion & Campaign



Enterprise Monetization

Multi Partner Settlement

- Recurring Subscription Billing
- Credit Line (Wallet)
- Multi Geography, Multi Tier Settlement



International Tax and Forex



Payment Gateway

05

Select use cases

We now look at three specific use cases supported by a partner-centric BSS platform. All these use cases will require the various suppliers to participate so the CSP can onboard and manage.

5.1 Smart agriculture

Agriculture is a source of income for 2.6 billion people. However, only efficient agricultural units can increase the productivity those people need. Smart agriculture requires modern and rationalized cultivation methods, less water usage, fewer chemical inputs, and more machinery and automation.

Reliable connectivity, low latency, and the ability to manage substantial amounts of data are among the critical network requirements to move to a digitalized farm of the future. With the deployment of 5G in agriculture areas, people can apply new solutions can be for higher and greener production.

Many use-cases are being implemented, such as real-time monitoring and sensing of environmental data through 5G IoT (e.g., temperature, humidity, soil pH, plant status}. A large number and variety of sensors will be deployed in different parts of farms. 5G mMTC capability will enable a series of uses-cases including:



Drone crop inspection

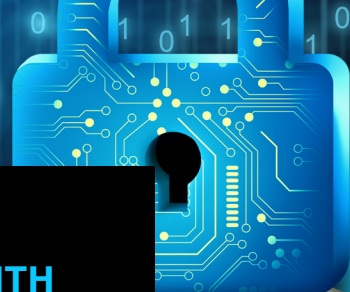


Remote driving and self-driving agricultural machinery



Automated farm sowing and harvesting

Cameras mounted on autonomous vehicles during harvesting should be able to transfer HD 4K or 8K video feed to the control center, making 5G essential to meeting requirements. Data and machine learning will improve many uses-cases on the farm, including higher precision in pesticide and herbicide sprays.

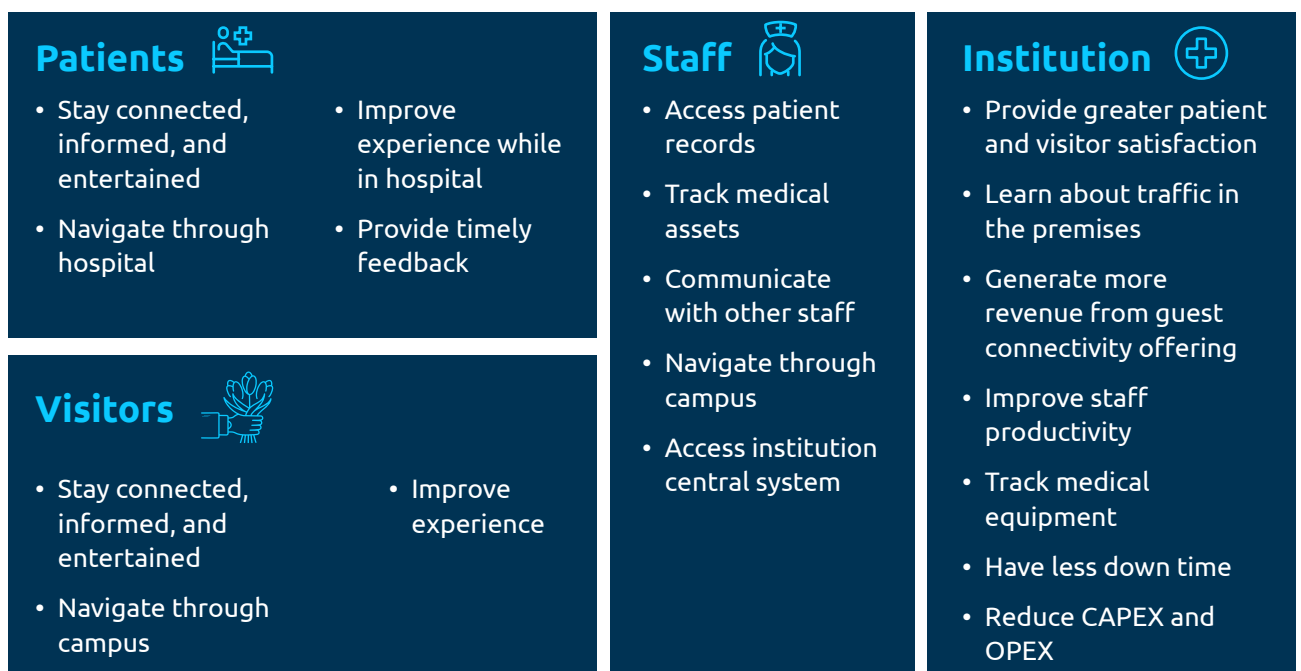


5.2 Connected healthcare

As the cost of care continues to rise, many healthcare units are looking for long-term solutions to minimize inpatient services. A growing number of inpatient healthcare services are already pushed to home and outpatient ambulatory facilities. It has become increasingly common to see physicians and caregivers using connected tablets and smart phones to record or access patient data, schedules, workflow applications, and more. But healthcare has only just begun to tap into the full potential of connectivity.

The use of connectivity in hospitals, clinics and other health institutions is very driven toward improving the delivery of healthcare services and staff productivity. There are a variety of applications and devices that use connectivity. Those include ambulances, infusion pumps, oxygen monitoring devices, smart beds, and mission-critical information applications, (e.g., access to electronic medical records [EMRs], real-time access to X-rays and MRI scans). Medical telepresence delivered via wireless helps scale provision of high-quality healthcare to remote and underserved areas.

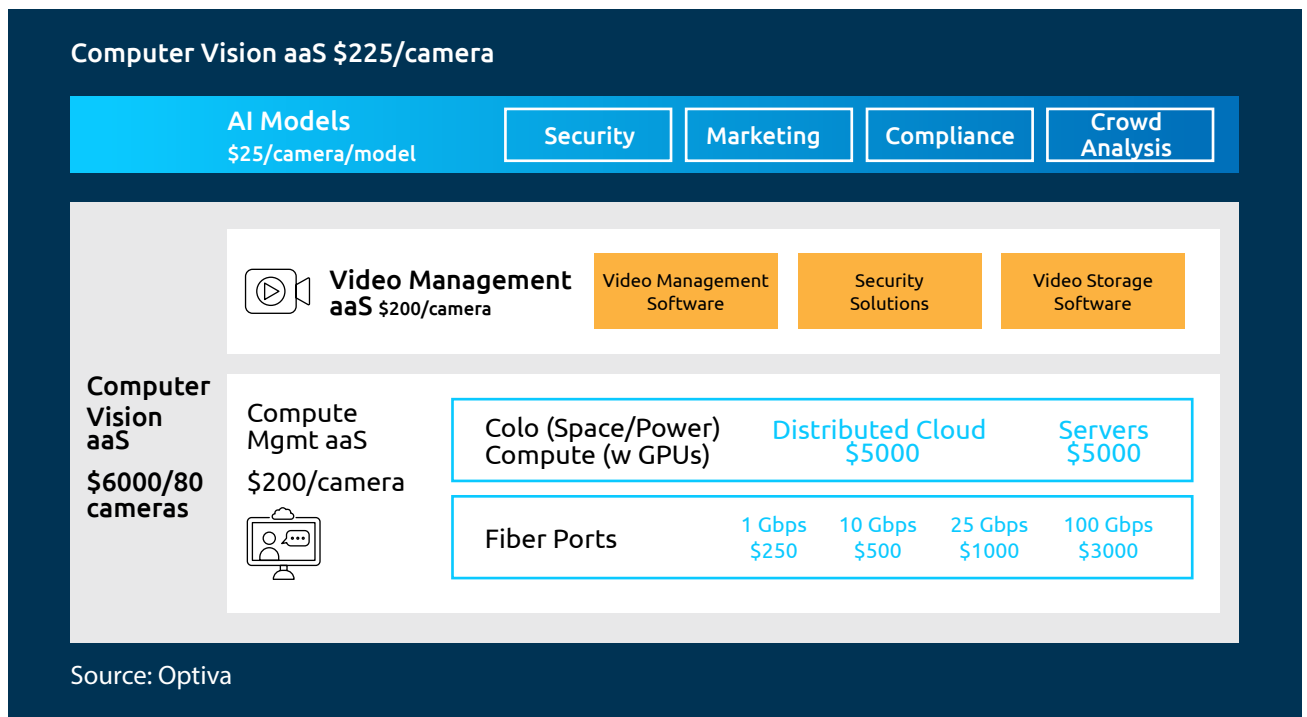
With the right platform, hospitals can create a customized 5G or Wi-Fi connectivity experience for all users: medical staff, non-medical staff, patients, and visitors — each with their own level of access rights, security, bandwidth consumption, and relevant features. Such tiered access can help hospitals increase staff productivity, generate new revenue streams, and improve their overall patient and visitor experience as indicated in the figure below:



Source: Maravedis LLC

5.2 Smart airport

Another use case is airport management. Various services are provided on top of the connectivity layer by the CSP. Security services aim to make airports “smarter” with closed-circuit television (CCTV) cameras, passenger heatmaps, retail space management, and more. Each use-case can be served by a best-of-breed supplier video specialist, compute, storage specialist, fiber provider, analytics, and others. All these suppliers can easily and quickly be onboarded into the digital marketplace, as shown below.




Conclusions

CSPs are under pressure to monetize their huge 5G investments in spectrum and CAPEX. B2B2x represents an excellent opportunity for CSPs, but only if they reinvent the way they service enterprise clients. A successful B2B2x model is one where CSPs provide valuable services to enterprises that support specific use-cases beyond connectivity.

For CSPs’ partners, the model can open the market to new customers. This is a win-win for all stakeholders, including the end-users, which can happen only through a flexible cloud-based partner-centric platform.