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Opening 5G networks to app developers

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Opening 5G networks to app developers

Evolving CPaaS markets to expose 5G network capabilities through APIs opens up new opportunities to monetize networks.

Key insights

- As 5G networks are built out globally, the opportunity for exposing 5G capabilities to developers is increasing.
- Harmonizing the exposure of APIs in 5G networks together with other service providers will attract developers to innovate at scale.
- This will also open up opportunities for service providers to monetize by deploying new pricing plans.

Opening up 5G networks to application developers brings new possibilities to drive innovation. The communications platform as a service (CPaaS) market is growing at 28 percent annually since 2021 and is projected to reach USD 22 billion by 2025.[1] CPaaS is essentially a collection of tools for the easy integration of features, such as SMS, chat or video calls, into various software. It provides the back-end communications infrastructure, presented as a service that is then integrated into a developer's own app offerings through application programming interfaces (APIs) and software development kits (SDKs).

Today CPaaS technology offers various opportunities:[2]

- Healthcare providers and government agencies can use CPaaS for automating reminders and managing appointments, while transport and logistic companies can easily send status alerts for deliveries through SMS.
- The travel and hospitality industries can integrate CPaaS with existing applications to offer contact-free services such as in-app calling and messaging.
- Online learning providers, including schools and colleges, can use CPaaS to access features like video calling, screen sharing and call recording.

In the current CPaaS value stack, service providers play an important role in providing SMS and voice minutes that are converted into programmable components for developers.

However, service providers can claim a stronger role at low investment levels, by offering advanced network services through current LTE deployments and/or existing 5G investments.

5G to transform exposure capabilities

As 5G networks are built out globally, the opportunity for exposing 5G capabilities to developers is increasing. By 2028, it is expected that 85 percent of the world's population will have 5G coverage.

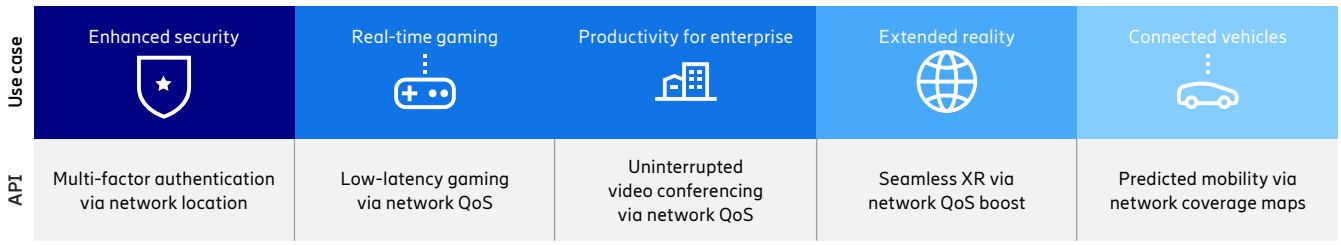
Some APIs will be essential to enabling new services, such as mobile XR, private 5G network apps and IoT low-latency apps, which service providers can monetize with different types of business models such as resell of enhanced APIs or through subscriptions.

But service providers will need to adjust their approach, making 5G networks easy to consume by others, such as application developers. This is a fundamental change, orientated in harmonizing the exposure of APIs in 5G networks together with other service providers in order to attract developers to innovate at scale.

The potential for 5G APIs is promising, as new capabilities become available to developers worldwide. These APIs will allow service providers to charge for new services, such as enhancing QoS and performance for mobile gaming, reliable drone management through low-latency video and location services – and superior authentication and security for financial transactions.

5G SA with network slicing gives service providers opportunities to provide traffic differentiation where different types of applications can be treated individually based on their needs. This will also open up opportunities to monetize by deploying new pricing plans, moving from the traditional approaches based on minutes, data use and subscriptions, to models with premium and segmented experiences which are consumed dynamically as they are needed through APIs. Moreover, service providers will be able to provide specialized services, giving application service providers (ASPs) the technical support needed for each type of service.

Figure 16: Examples of use cases enabled by advanced network APIs



[1] IDC and Gartner, CPaaS 2021 metrics.
[2] Vonage, What is CPaaS (Communications Platform as a Service): A Brief Overview.

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