



Singtel CAC Meeting Report

The rise of telco APIs: Key insights on enterprise use cases

The API economy will ignite unprecedented innovation and growth

APIs aren't exactly cutting-edge – the concept of an API economy has been around for many years. But as new business demands and challenges take shape, telco APIs are emerging as an answer to the new capabilities that enterprises need. Telcos like Singtel have modernised their infrastructure in recent years, making it easier to transform telco data and capabilities into business value.

In today's fast-moving landscape, APIs give businesses the agility to tap telco partners' capabilities and go-to-market quickly – rather than building from scratch. This has become more relevant than ever amidst a recent surge in security challenges like phishing. Telco data and services have much to offer in helping enterprises combat such threats and innovate solutions.



Open Gateway is unleashing mobile network capabilities for enterprises

One crucial missing link in the transformation of telco data into business value has been standardised frameworks. While individual telcos have launched various services, the industry needed a standard framework that could harmonise APIs and make them readily available across networks and countries.

GSMA's Open Gateway¹ is set to be a game-changer. Launched earlier this year, Open Gateway is a framework of common APIs designed to unlock universal access to operator networks. This enables developers and cloud service providers to rapidly build and deploy new services, accelerating the next generation of immersive technologies and seamless customer experiences.

One good analogy for Open Gateway is the convenience of roaming. For decades, we've been able to buy a single SIM card and roam across the world's networks. Similarly, Open Gateway's common APIs will deliver a global connection through one point. Available through the cloud, these APIs can be bundled with other functionalities to create additional layers of capabilities, enabling new innovation to occur.

At the moment, over 35 operators have joined Open Gateway, representing more than two-thirds of mobile connections around the world. Beginning with eight network APIs² at launch, the project has grown to over 30 proofs of concept, from SIM Swap to Quality On Demand. In the coming year, we can look forward to many more APIs being developed – creating new services and unlocking the value of 5G connectivity.



Enterprises can gain control of network quality with Quality On Demand

One Open Gateway API that is stepping into the spotlight is Quality On Demand. This API allows enterprises to develop global controls over network performance, enabling them to choose their required levels of latency and throughput on demand.

This opens up a world of use cases that call for a low-latency, high-bandwidth user experience. Remote control of autonomous vehicles is a key example. To eliminate lag, enterprises can request the required Quality On Demand from the mobile network via the API, securing a consistent performance for machines or vehicles connected to multiple networks across markets.

Such always-on, quality support will be useful for video conferencing across various scenarios, like remote medical care and emergency services. Hospitals and doctors will be able to control the network quality from wherever they are, allowing them to conduct real-time training and provide remote medical services at places like mine sites.

Gaming is another arena where Quality On Demand can revolutionise the user experience. Indonesian telco Telkomsel has recently launched a GamesMAX Booster using a Quality On Demand API. By activating the booster pack, gamers can benefit from a stable network and lower latency, which gives them a split-second advantage over their opponents.

Telco APIs can help enterprises combat modern security risks

Today's threat landscape is more sophisticated than ever, with bad actors exploiting authentication-based vulnerabilities to access business systems and services. Telco data contains insights that enterprises can tap to authenticate user identities and reduce risk.

Promising API solutions have already been deployed by individual telcos in the region. China Telecom, for instance, has created a solution to decrease fraud risk without impacting the customer experience.

Using their network capabilities and consumer data to build up risk profiles, the Chinese telco has various APIs that developers can call to validate user identities. One of these is SIM Swap – an API that authenticates whether the SIM card doing a transaction is recycled, and hence can detect cases where hackers have taken over a customer's phone number. This solution is already used by e-commerce giants like Taobao, which queries the API 100,000 times a day.

Over in Indonesia, local telco Telkomsel has developed an API for microfinance institutions to reduce fraud risk. Dubbed Telco Credit Score, the API assesses potential customers based on their Telkomsel service usage behaviour, such as billing and cell phone change. The API will then return a credit score from 1 to 25, giving financial institutions a risk indicator to evaluate before approving microloans.

While telcos are already deploying such APIs to serve enterprises in local markets, the lack of standardisation means that these solutions are not readily available to new markets. By standardising API frameworks, the Open Gateway initiative has the potential to unlock global access to these solutions.

SingVerify can support the fight against social engineering scams

An alarming wave of social engineering scams has swept Singapore in recent years. In 2022 alone, victims in Singapore lost S\$16.5 million³ to phishing scams. Singapore scam victims also lost the most money on average globally,⁴ according to data from the Global Anti-Scam Alliance.

Businesses face the urgent task of verifying user identities and safeguarding customer assets – something that telco data can help to accomplish. Singtel has packaged three telco APIs into a seamless enterprise solution to validate digital identities: SingVerify.



Number Verify allows businesses to check the phone number of the device being used to access their services.



Device Location triangulates the location of the mobile device attempting a transaction.



Call Status checks whether there is ongoing call activity in parallel with an attempted transaction, as this is a key indicator of a social engineering scam.

From banking transactions to retail payments, SingVerify can perform authentication in the background to significantly reduce the risk of scammers hijacking the 2FA or MFA process.

Watch now

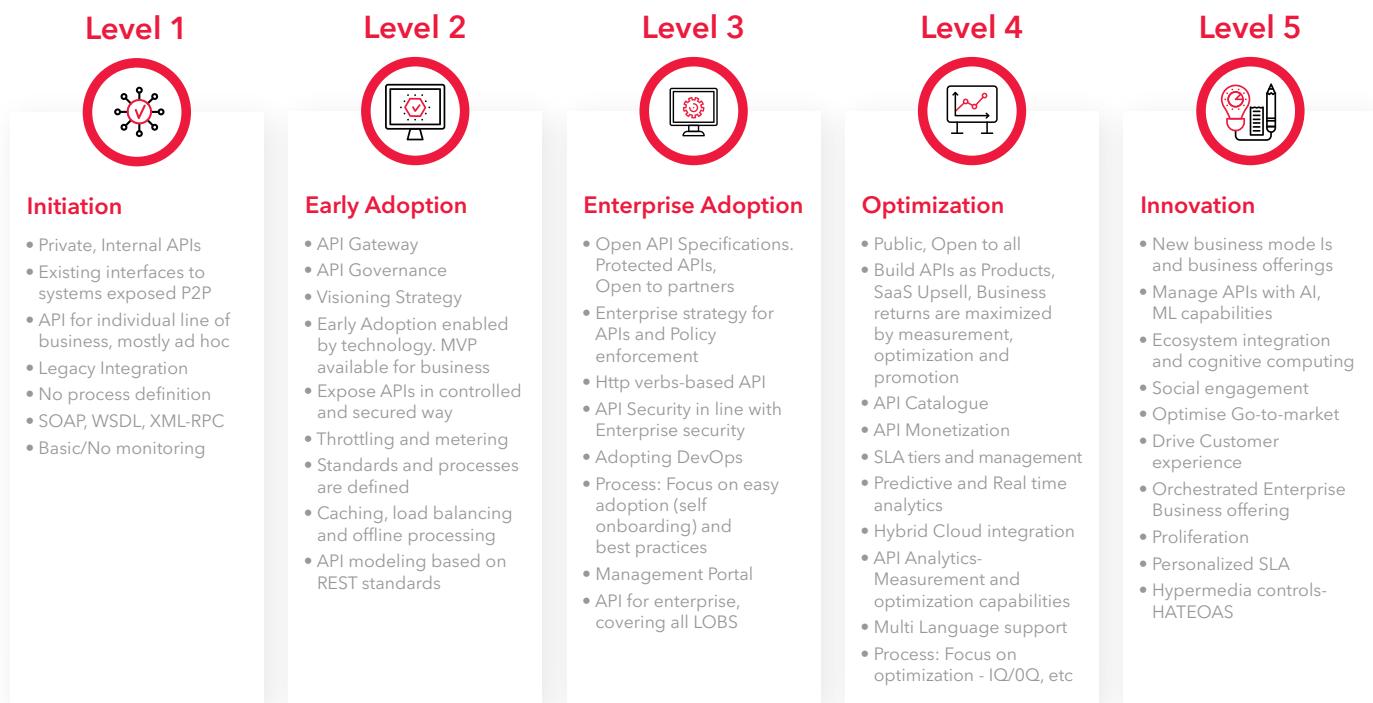
SingVerify seamlessly and securely authenticates digital identities with the power of telco data.

Businesses are beginning to harness APIs - but face hurdles in their progress

As the API economy grows from strength to strength, enterprises are making APIs a priority in their strategy. Rapid's State of APIs 2022 Report⁵ reveals that 70% of developers expect to see more API usage this year, as compared to last year.

However, many industries are still in the early stages of maturity for API implementation. Organisations are currently still using private and internal APIs, or moving toward exposing APIs in a controlled way.

API Maturity Model



Source: LTI Mindtree - The Journey to API Maturity

During the meeting, CAC members highlighted several challenges in the journey towards API maturity: the need for better understanding of use cases, lack of resources and ecosystem support, as well as questions around ROI.

To grasp the potential and ROI of API innovation, we can look to two well-known enterprises blazing a trail in API innovation. One example is cloud-based CRM software company Salesforce, which derives 50% of its revenue from the API ecosystem. Salesforce's Partner Marketplace is a key driver in its API journey, bringing together partners that build applications for CRM APIs to consume Salesforce services.

Another example is leading Singaporean bank DBS, which has an API marketplace dubbed DBS RAPID. Clients can leverage DBS's API capabilities to enhance their customer experience and facilitate transactions within their own ecosystem.

Ultimately, harnessing APIs entails rethinking your organisation's business model. On one hand, enterprises need to think about their core strengths and the unique value that they can add to the ecosystem. At the same time, they will be able to leverage components from partners rather than building from scratch, reducing the development cycle of their own products.

As enterprises innovate to keep up with an ever-changing landscape, the API ecosystem will empower them with the agility and ability to scale.



Sources:

1. GSMA, GSMA Open Gateway - Future Networks
2. GSMA, GSMA Open Gateway API Descriptions - Future Networks
3. The Straits Times, Scam victims in S'pore lost \$660.7m in 2022; more than half of them were young adults, 2023
4. The Straits Times, \$1.4 trillion lost to scams globally; S'pore victims lost the most on average: Study, 2023
5. Rapid, State of APIs: growth and more growth on tap for 2023, 2023

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