

Pursuing Growth and Innovation as a Digital Wallet Provider

Through an Open API strategy

Brief overview on the digital wallet industry in Singapore

The digital wallet industry has been gaining traction recently and is poised to grow in the coming years. In 2019, digital wallets already account for 14% of all online transactions and representing S\$680 million of sales. Transactions made through digital wallets are projected to reach 22.5% by 2021¹.

The steady growth in the use of digital wallets is the result of the government's initiatives to transform Singapore into a cashless society. The Payment Services Act (PS Act), which came into effect January this year, is meant to strengthen consumer protection and promote confidence in the use of digital payment methods such as digital wallets². The changes to local regulations, coupled with Covid-19, has accelerated the adoption of digital wallets³.

Shift in consumer behaviors and demands

In the midst of Covid-19, the use of the SGQR payment method – a single unified QR code for payments that is supported by many digital wallets – has become increasingly popular due to the contactless nature of the payment method.

Merchant adoption of the unified SGQR payment method has also been on the rise, given that it charges a much lower processing fee, which can be as low as 0.5% as compared to an industry average of between 2% to 5%⁴. The low barrier to entry encourages places like hawker centers, who have traditionally accepted only cash payments, are adopting cashless payment methods.

The rising adoption rates of digital wallets can also be attributed to an increasing trend of consumers wanting to pay with the least amount of friction. This led consumers to turn to digital wallets, since they can work at a POS system, in-app and online all through an app⁵.

Arguably, we find that these reasons are likely to be part of the cause of a decline in card transactions in Singapore⁵.

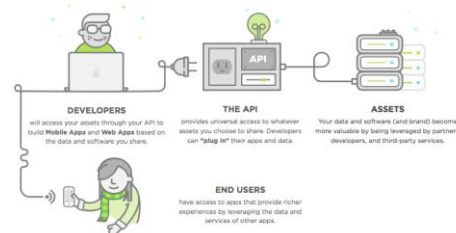
Pursuing growth and innovation through an Open API approach

Given that the digital wallet space is a lucrative opportunity for growth, we do foresee it to become increasingly saturated in the near term. Even with the saturation of digital wallet apps, there may be unserved and underserved markets to be tapped on⁶. Digital wallet providers should redefine their strategy by embracing an Open API approach to meet these unmet needs.

Therefore, we seek to provide insights on how an Open API strategy can help a digital wallet provider build an innovation ecosystem of consumers, merchants, and developers.

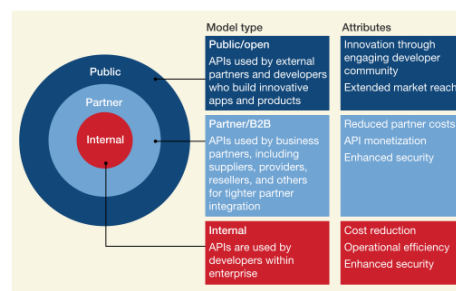
But first, what exactly is an API?

An application programming interface (API) allows various software applications to communicate and interact with each other and exchange data directly in a standardized format, without the need for human intervention⁷.



Source: Upwork, 2019⁸

API itself is not a new technology, it has been around for more than two decades. APIs can generally be categorized into three models: internal, partner and Open APIs.



Source: McKinsey Payments Practice, 2017⁹

Many organizations in the financial services industry should already have APIs that they use internally, though these APIs are often not open to the public. Some may also share these APIs with their partners, thus forming a closed ecosystem. The recent trend is that the industry is starting to realize the business value that an Open API approach can bring¹⁰.

Why an Open API approach is important and benefits wallet providers in today's context

By opening data and services through APIs, digital wallet providers are essentially unlocking more opportunities for creating new value, advancing financial inclusion, driving new business models and building a whole new digital ecosystem.

Creating new value

Anyone can use these APIs to bring new value to end users. For example, Adyen combined the APIs from different digital wallet providers and created an API marketplace, which makes it easier for e-commerce platforms to integrate with the many payment gateways available.

Driving financial inclusion

Digital wallet providers who open their APIs will enable third parties to innovate and develop payment solutions for the underserved. This ultimately drives financial inclusion¹¹ and allow a wallet provider to enter and gain higher reach in emerging markets.

New business model and revenue stream

Open APIs can be monetized to provide a source of revenue, and to unlock a new form of business model for the digital wallet provider. Some potential monetization models include charging the developers who use the APIs, end-users who use the payment solution, or even entering into a revenue-sharing agreement¹². For example, a customer-facing company who uses the wallet provider's APIs can deliver additional services to its consumers, while the wallet provider can profit from an increased usage of its APIs.

The new revenue stream created from Open API presents an underlying growth prospect, which makes it attractive for investments. Galileo, a FinTech company that specializes in payments API infrastructure, was acquired by SoFi for US\$1.2 billion¹³. Galileo is the same company that powered FinTech giants like Monzo, Chime and Robinhood, has long opened its APIs for anyone to create new FinTech products¹⁴.

Building a whole new digital ecosystem

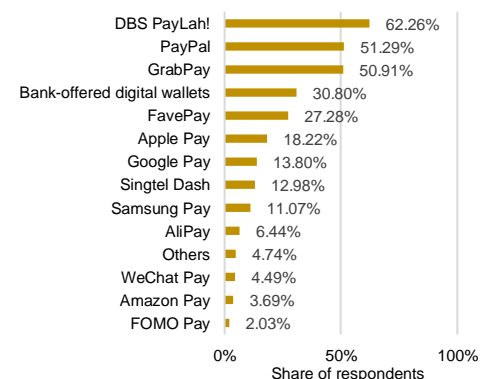
The Galileo example above reemphasizes the importance for wallet providers to build an ecosystem where developers can solve pain points of consumers and merchants. Through an Open API strategy, this becomes very much possible. This is typically done through hackathons, where APIs can be used as a tool to foster innovation in the payments industry.

In today's world, more firms are leveraging on each other for their core competencies¹⁵. Adopting an Open API strategy would allow a digital wallet provider to share its core competencies through APIs. This way, wallet providers can focus more time and resources on partnership and marketing.

Analysis of Open API adoption by digital wallet providers in and beyond Singapore

In the case of Fave and Grab's tie-up, Fave integrated GrabPay as an alternative payment method even though the former already has a digital wallet solution¹⁶. This strategic partnership combined Fave's merchant network with Grab's user base, allowing Fave's users to spend their GrabPay balance at Fave's retailers and Grab access Fave's large merchant network. Both Fave and Grab can also tap onto each other's services, include Fave's cashback platform, FaveDeals and Grab's loyalty program to bring more value to its customers.

Major e-payment services used among respondents in Singapore in 2020



Source: Rakuten Insight and Statista, 2020¹⁷

The partnership would not have been possible without GrabPlatform, a suite of APIs¹⁸, which enabled Fave to let its users link their GrabPay wallets through the Tokenization API¹⁹. Grab and Fave have since maintained a consistent lead in the non-bank digital wallet space. With an Open API strategy, Grab and Fave can simultaneously leverage on each other's core competencies while reaching out to the wider payments ecosystem to multiply their reach.

Next, we look at Singtel Dash, who has been around since 2014 and is one of the first digital wallet provider in Singapore. Despite having a head start in the digital wallet space, Dash was unable to attain a durable first-mover advantage as it failed to keep up with the trend of opening their services through APIs. For example, there are many merchants today that have integrated a Pay with GrabPay button in the checkout flow using Grab's APIs. We have yet to see something similar being implemented by Dash, which is one of the key factors that impeded their growth. Without Open APIs, Dash has lost an opportunity in engaging developers who can innovate new solutions and build on top of Dash's existing payment services.

In China, digital wallet giants like Alipay and WeChat Pay have long adopted an Open API approach. Both digital wallet providers exposed Open APIs for the wider developer community to create "mini programs" that works within the wallet apps. During the Covid-19 outbreak, developers in China have been using the APIs to create mini programs to support merchants going digital. For example, a software vendor was able to help catering businesses develop Alipay mini programs that enable customers to scan a QR code to order food, and then pay for it using Alipay²⁰ – and this is all done within the Alipay app itself. In just two months, there were 800 of such mini programs built, each with more than 10,000 active users. Not only does Open APIs benefit businesses, it helped Alipay to grow its user base. Such third-party innovations would not have been possible if not for an Open API strategy.

UniQlo created a WeChat mini program that integrates with WeChat Pay for a seamless payment experience



Source: Forbes, 2019²¹

From the case studies above, we can see that digital wallet providers who fail to embrace Open APIs will face an uphill task in retaining customers and maintaining relevance in today's context.

Challenges associated with adopting an Open API strategy

Nevertheless, adopting an Open API strategy comes with its unique set of challenges, from business strategy to technical implementation.

Lack of management buy-in

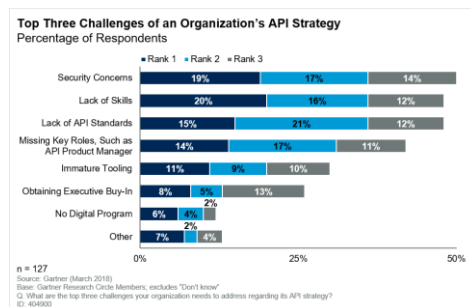
Before an Open API strategy can even begin, support is required from the management²². The lack of management buy-in is probably the first hurdle to building an Open API strategy. An approach here is to show the strategic value of APIs and how it aligns with the digital wallet provider's vision.

Not sure where to start

Sometimes, firms do not know where they should start building their Open APIs. A McKinsey Digital insights paper suggests that customer journeys are a good place to start thinking about which APIs to build. One could start off by identifying which are the important customer-facing services, and then prioritize the API development based on those services as a start.

Data security challenges

Open APIs will also expose the digital wallet provider to various data security risks, given that the attack surface for hackers to gain access to sensitive customer data will be widened. According to Gartner, it is predicted that by 2022, API abuses will be a major attack vector²³.



Source: Gartner, 2019²⁴

Such data security concerns may potentially hinder the implementation of Open APIs, given that customers expect their wallet providers to keep their personal information safe. To address these concerns, it is crucial that wallet providers have a security-first approach when building the Open APIs. The approach should be broad and can range from adopting a test-driven development approach at every stage of the API development, to ensuring proper checks on the third parties using the Open APIs.

Current regulatory trends towards Open APIs

While these challenges remain, we observed that the world today has been embracing the concept of open banking and APIs ever since the European Union's revised Payment Services Directive (PSD2) came into effect. The purpose of PSD2 was to advance the concept of open banking, by allowing third parties to access a financial institution's payments and data services.

PSD2 accelerated the adoption of the open banking initiatives across the world, as more countries are now realizing the benefits and potential of opening financial data and services to third parties through Open APIs to encourage competition and innovation. While the Monetary Authority of Singapore (MAS) has actively encouraged financial institutions in

Singapore to open their data, it has no intention make it mandatory and is taking an organic approach by letting the financial institutions share themselves. In fact, MAS and the Association of Banks in Singapore developed an API playbook to provide guidance for FinTech players to be part of the Open API economy.

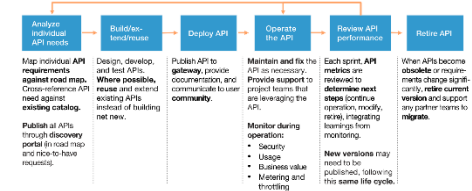
With government initiatives in supporting the development of Open APIs, coupled with how firms are realizing the strategic value Open APIs bring, we see that it will become an upcoming trend and will pave the way for a disruption in the financial services industry.

As a digital wallet provider, how should I implement my Open API strategy?

Digital wallet providers should prioritize on their core competencies and start developing APIs that revolve around the payment flow. For example, wallet providers can start by providing payment gateway APIs, so that the wider developer community can integrate them into existing e-commerce checkout flows.

After delivering an initial set of Open APIs, wallet providers must understand that a robust API management tool is essential to keep an Open API ecosystem sustainable in the long run²⁵. To stay relevant in the everchanging FinTech landscape, an API lifecycle management in place: from analysis of API needs, to selecting the right set of metrics to evaluating its performance and finally, retiring the API.

Agile API lifecycle with continuous improvement



Source: McKinsey Digital, 2018²⁶

Continuous improvement is crucial in maintaining the growth of an API ecosystem. To do so, it is imperative that wallet providers select the proper metrics to measure its performance. With proper metrics, wallet providers can collect the right data and analyze if its ecosystem is generating business value. This way, wallet providers can make prudent decisions on areas which requires continuous improvement. If the decisions result in noteworthy impact, wallet providers can then implement them to a wider scale and continuously re-assess its results.

Open APIs are the future to interconnectivity

Open APIs are not just technical solutions; they are business products too. Open APIs help to unlock new forms of business opportunities, partnerships, growth, and rapid innovation for the wallet provider. Digital wallet providers must realize that in an interconnected world, those who work in silos will fall behind. Open APIs will definitely reshape the future of digital payments and accelerate growth and innovation for the adopter.

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