Accenture Payments

Driving Innovation in Payments— Powered by APIs & Open Banking

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The payments industry continues to experience disruption by new players, new opportunities and new risks. The latest disruptive force: powerful application program interfaces (APIs) that transcend technology. It is about evolving the business model to create unique business partnerships.

APIs have a nearly-20-year history helping progressive companies, like Salesforce, eBay and Amazon, transform industries, open up new opportunities and improve rewards against risks of the digital world. In the travel industry, API-driven public apps from Travelocity, Expedia and many others allow shoppers to choose their best travel options while partner, device or data apps share information to improve sales, logistics or service. Telecommunications companies are now offering messaging, payments and location APIs to reenergize their value chain and revenues; Credence Research projects the global telecom API market to grow 20 percent per year from 2016 to 2023[1].

PayPal began the open banking revolution back in 2004 when it launched the PayPal API, opening up some of its platform functions to third-party developers and further expanding its services across markets. APIs supplied by new smarthphone-centric online bank Mondo, allows for easy collaboration customer account data interaction, such as balance, spend and transaction history, without any prior programming knowledge; some 20 live apps now use the alpha Mondo API.[2] Bold financial services firms, including Capital One, BBVA and Credit Agricole, are also exploring APIs to broaden the reach and role of their companies.

Overcoming barriers to capture benefits

Still, many traditional payment providers are hesitant to fully embrace APIs. They often consider API programs as purely technical endeavors, therefore falling short in achieving real business impact. Banks and other firms are waking up to the fact that going to market with an API-enabled approach gives them a chance to gain market advantages. For example, data APIs give banks an easy way to sell to third-party companies appropriate data that they can reuse to add value to their customers.

Adopting an API approach also means keeping up with the direction of the payments market. Consider industry newcomers, like Braintree and Stripe, who are already using APIs to engage both businesses and developers in friendly ways. Any market share that is lost now will be harder to recover later as the innovation-driven marketplace becomes more competitive and crowded.

Then, there are new regulatory changes to meet. For example, Europe's Payment Services Directive (PSD2) and Access to Accounts (XS2A) are already mandating that financial institutions give customers and third-party integrators programmatic access (typically API-based) to their data. It's entirely possible that the question of when to enter the mature API market may be taken out of players' hands. As new regulatory frameworks increasingly take hold around the world, organizations that are not adequately prepared will face higher costs of tactical change and find themselves at a significant disadvantage as the marketplace rapidly evolves.

The use of APIs, new regulation and other market drivers threaten incumbent banks' payments revenues and customer ownership. Accenture analysis indicates that banks in the UK, for example, could lose up to 43 percent of their current payments-based revenues by 2020.[3]

Renewed relevance of APIs

APIs are not a new idea. They are essentially the links or pathways that enable integration within the enterprise space, making it possible for IT systems (such as enterprise resource planning or customer relationship management systems) to exchange data electronically. While many organizations will have hundreds, or even thousands, of APIs internally that link specific systems, these APIs often lack standardization, adequate documentation or openness to the public.

Today's renewed relevance of APIs, however, is reaching past traditional borders of the IT department into the broader business organization and business world. This is because across industries, digital transformation is demanding new ways of working and customers have ever higher expectations for interacting with organizations.

To meet these demands, businesses must bypass traditional corporate boundaries, both internally and externally, and start opening up data and services in an easy-to-consume manner. Modern web APIs enable it to happen simply and at scale. Enterprises with public APIs had three times more online traffic growth from 2014 to 2015 than those without APIs, according to Apigee research.[4]

Web APIs can be published fast and often without huge IT programming, and testing, refining, scaling up or shutting down API-based services are simple and straightforward. API platform and gateway providers continue to emerge to making it easier for companies to manage open APIs and exploit mobile commerce.

For example, Venmo recently expanded upon its peer-to-peer mobile payment platform to enable consumer-to-business payments. Pay With Venmo is a set of integration tools that enable merchants to accept Venmo payments from customers. An intuitive and intelligent API platform from Apigee, an Accenture alliance partner, allows banks to reuse their technology assets in innovative ways. Its new Open Banking APIx software solution is set to help banks in the European Union more quickly and easily embrace open banking requirements generally set out in the revised Payment Services Directive.

APIs are a path to Open Banking and driving innovation to latent demand (for functions and services we don't yet understand or had anticipated).

Visa opens up its retail payments network as an API

For the first time, Visa is opening up its payments processing capabilities to third parties and making it easy for software application developers to integrate Visa technology into their new applications and consumer experiences. A globally accessible portal, Visa Developer, gives developers direct access to Visa's payment products and services through hundreds of rich API sets. It also puts development expertise and tools—comprehensive documentation, sample code, testing sandbox and more—at developers' fingertips.

Visa Developer engagement centers help foster a highly collaborative and co-creative community. The program is one way Visa intends to drive innovation in payments solutions and stay at the forefront of digital commerce.

Applying APIs in payments

APIs help make enterprise IT systems, services and data easy to consume internally and externally. Figure 1 offers just five areas where APIs add value in the payments space.

FIGURE 1. Five (of many) examples of API use in payments

	AREA	RATIONALE	OUTCOME
1	**Empowered third-party apps (payment services)**	Give third-party companies easy-to-use APIs that offer payment and authentication services to reduce their burden and complexity while increasing revenue potential for payment providers	Revenue growth
2	**Monetization of existing services**	Extend existing internal services (such as customer identity and verification) to support external payment processing for third parties as a fee-based API	New revenue sources, provider loyalty
3	**Smarter aggregation tools**	Offer a cheaper, more accurate and secure way for customers to use aggregators and other tools to gain a holistic overview of their finances in simpler ways—for example, without providing log-in details to a third party	Better customer security and experience at lower cost
4	**New innovative features or services**	Use predefined APIs and incentives (use software developer events, such as the Edinburgh Fintech Hackathon) to create functional and reliable offers far quicker and easier than ever	Improved user experience, innovation, time to market
5	**Enhanced customer onboarding**	Apply well-defined APIs to standardize and simplify the customer onboarding process for drastically lower cost and a more attractive value proposition	Increased revenue, reduced cost; improved user experience and speed

Making APIs work

Based on Accenture's experience helping financial institutions develop and implement their API approach, three factors make APIs work: business model evolution, powered by IT; a robust API management platform; and a RESTful IT architecture.

1 Business model evolution, powered by IT

APIs are at the heart of any digital organization and are critical to a successful digital transformation. Beyond just an IT-driven project, there are four reasons why an effective API program must be treated as a joint venture between business and technology:

- **APIs are business products**. They are best designed to address a specific need in an attractive, easy-to-consume way. The more people who use the API, the larger the impact it will have.

- **Speed and agility**. The two development traits providers need to capture market opportunities. These are best gained when business and IT work together, acting swiftly and appropriately funding API-enabled opportunities.

- **Risk and security**. Combining business understanding of risks associated with third-party access to its data with IT's ability and chance to mitigate the risk.

- **Accountability.** Where both business and technology are aware of the value of APIs to the organization's digital vision enough to embrace and execute an API strategy.

2 Robust API management platform

A successful API program that enables payment providers to work at scale outside of their own enterprise requires a simple, standardized API management platform. Key platform considerations include:

- **Stability**. This is an evolving market and vendor landscape that is changing rapidly as larger traditional technology organizations are acquiring API management platforms to make their overall integration offerings more appealing. Navigating this environment can be complex.

- **Analytics and usage tracking**. A good API enablement platform helps monitor API usage, run-time performance and traffic, API adoption, API economics and other measures that point to return on investment performance.

- **API lifecycle and documentation**. Efficiency and effectiveness requires tools that help manage the processes for designing, developing, publishing, deploying, versioning, and governing APIs. This can be a very complex and error prone task if attempted by a tool that is not designed for APIs. Due to the pace of change, creating a bespoke solution is likely to be very expensive and less than competitive with class-leading solutions.

- **Developer portals**. A developer portal gives developers easy access to APIs and allows them to communicate with other developers and with the API host to learn how to make best use of the API. It also allows providers to learn from and better understand the community. Helping each other drives positive business outcomes for all involved.

- **Hosting**. API gateways and API enablement platforms can be both on premise and cloud-based. While cloud-only can be preferable in many circumstances, it can present issues in terms of internal restrictions on what data can be exchanged via the cloud and national regulations around data transfer. In the payments space, it is worth considering a platform that can handle both on-premise and cloud-based hosting.

- **Security and compliance**. Remaining secure while enabling APIs is essential. Many platforms provide security features, such as Payment Card Industry compliance. A provider should also use platforms that can monitor access to data via APIs and can revoke or change access rights if required.

3 A RESTful architecture

Compared to Simple Object Access Protocol (SOAP) and internal-based API approaches, web-based and primarily public APIs almost exclusively rely on Representational State Transfer (RESTful) architecture. Although SOAP still has some place in existing internal applications and infrastructure, it is not designed for mass consumption. RESTful provides the following benefits for APIs and API enablement platforms:

- **Scale**. Should a specific set of APIs become popular very quickly (such as a payment processing API that can be used in mobile apps), providers can address that demand without performance issues.

- **Performance**. RESTful makes far less demands on existing backend systems and, therefore, performs faster and more efficiently than SOAP—two necessary factors for ecosystem players to work well together.

- **Simplicity**. RESTful APIs have four basic commands and work with a specific set of parameters, which provide for a fast onboarding process and attract more partners.

- **Two-speed IT**. An API layer in the IT architecture effectively extracts data needed from backend systems, making data consumption much easier and removing backend system constraints to new innovations (mobile, web or otherwise).

While existing SOAs or other middleware with enterprise value may take some of the work out of successful API enablement, they are not by themselves suitable as a solution to become API-enabled for the wider world. Similarly, SOAP and other integration methods will still exist; however, they are (and should remain) part of specific point-to-point solutions rather than part of the digital transformation story.

Moving towards an API-centric approach to digital payments

A first step in moving ahead with API enablement is to start thinking of APIs as collaborative products that increase revenue. It is a board-level move beyond a technological development. It is a new way of working and creating value from the outside in, which requires commitment from both business and IT.

Secondly, identify and understand the key use cases to drive quick wins, and then implement and learn from them. What are areas that the business might be missing out on? Where are new players doing well? Where might you best use the lion share of the business's data? What are key opportunistic plays, such as real-time payment APIs, where the market is likely to determine the use cases and products? Potential areas of interest could be:

• **Non-traditional workers**. An emerging work group are people without formal employment who either work freelance on a project basis or work in the emerging sharing economy for companies such as Uber. Because it is often difficult for people in this segment to obtain a credit card without typical employment, they need other ways to accept and make payments.

• **Customer-facing apps**. For customers, interacting with a payment provider can often be a tedious and long-winded process. Determining what customers need and creating APIs that enable functionality paves the way for great apps that can be updated in an agile and iterative manner.

• **Third-party apps and online stores**. Merchant clients that are expanding their business from an online or mobile perspective need web APIs that make payments easy for them. By meeting this need, payments providers demonstrate their ability to compete with established players in this space, such as Stripe, Braintree and others.

Lastly, mobilize with the right technology solution and internal teams. APIs are not yet fully mature in the fast-evolving payments marketplace. Selecting vendors that are easy to support, are likely to stay around for a while and have good existing relationships with developers is key. Equally important is assembling the internal team and funding structures to move quickly and make the most of the opportunities that APIs can enable.

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