PayPal

Evolving Payments

Orchestrating and optimizing for profitable business growth.

Contents

Experts explore the evolving payments landscape.

The payments landscape is always evolving. From innovative technologies to regulatory requirements, change is everywhere, and leaders of large businesses can find it hard to know the best path forward for profitable business growth. We're here to help.

This ebook is a collection of perspectives from PayPal's product and industry experts regarding the challenges facing large, global organizations – and strategies to overcome them. The experts discuss everything from growth orchestration to authorization rates to faster payouts and more, on a micro and macro level. Common themes appear around driving conversions, expanding reach, mitigating risk, and simplifying payouts – and the experts break it all down to help you apply their understanding of the payments landscape to your business strategies.

Wherever you are in your journey, we hope their experience can help you strengthen your organization and give you confidence to thrive in an ever-changing world.

The State of Payments

- ▶ The state of the payments landscape.
- ▶ It all starts with vault.
- ▶ Card processing: Past, present, and future.
- ▶ Treasury services at scale.
- ▶ Integrating with PayPal Braintree.

The state of the payments landscape.

By Cindy Turner

In today's economic climate, we've seen businesses shift from a "growth at all costs" mindset to a hyperfocus on *profitable* growth. In recent years businesses have tolerated a wide variety of activities that grew revenue – despite the potential risks and the fraud or chargeback costs associated with some of them. Today, that tolerance has disappeared.

As a result of this hyperfocus on profitable growth, more businesses are also looking to simplify the management of their technically complex payments systems, from the front-end transaction processing to the back-end funding flows. Payments providers are fulfilling this need by evolving from merely payment processors into tech-enabled strategic growth solutions for large businesses.

Increasing customer conversion and driving revenue.

There are two keys to increasing customer conversion rates and driving revenue:

- Identifying known customers and delivering the shopping experience they want, which includes a frictionless checkout.
- Shutting out bad actors who are likely to commit fraud, particularly as the cost of fraudulent transactions increases.

Payment service providers (PSPs) are offering advanced technical capabilities, including artificial intelligence (AI) and machine-learning tools, to help businesses achieve these goals. For example:

- Identity and authentication tools that securely store customers' payment credentials, and enable businesses to tailor their checkout experiences for each customer.
- Authorization rate optimization tools, like retry tools, that help make intelligent decisions about when to retry a failed transaction.
- Fraud detection tools that use machine learning to analyze customer and transaction data to help prevent fraudulent transactions and win against chargebacks.

Orchestrating growth.

Businesses with ambitious growth plans are seeking payments orchestration services – the management of a business's entire payments ecosystem through a single application programming interface (API) integration.

Today, businesses are advancing their road maps while staying mindful of costs. Businesses would rather invest time and money in their core services – not grow internal technical teams to manage their payments stack. Orchestrators can help empower businesses to focus on growth while helping them deliver positive customer experiences that will maximize revenue.

Forward-thinking businesses know they shouldn't manage their payments systems alone. Now is the time for PSPs to flex their technical expertise and capabilities to show how they can manage payments successfully and ultimately help organizations meet their conversion and revenue goals.

Cindy Turner
Vice President and General Manager, PayPal Braintree

> " Businesses have shifted from a 'growth at all costs' mindset to a hyperfocus on profitable growth. Payment service providers must evolve to meet the needs of large businesses that want to aggressively grow revenue while keeping an eye on costs.
> – Cindy Turner

It all starts with vault.

By Adam Hachtel and Mindy Chon

At its core, a vault stores a customer's sensitive data – including payment information – on behalf of a business. When a customer transacts on a business's website, the business can save important payment information – name, address, and credit card information – to facilitate future checkout. This simplifies the customer's future checkout experience, which can translate to speedier transactions.

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At the heart of any payments infrastructure is the vault. Beyond storing a customer's sensitive data, the vault is the key to providing value-added services that give a business a robust, interconnected payments network so it can grow wherever and whenever it needs.

– Adam Hachtel

Instead of storing this sensitive data in its own database, a business can send that information to its payment solution's vault for safe storage. Beyond storing customer data to help deliver positive shopping experiences, a vault makes it easier for a business to offer value-added services using the vaulted data. These services can help with conversion and revenue goals by:
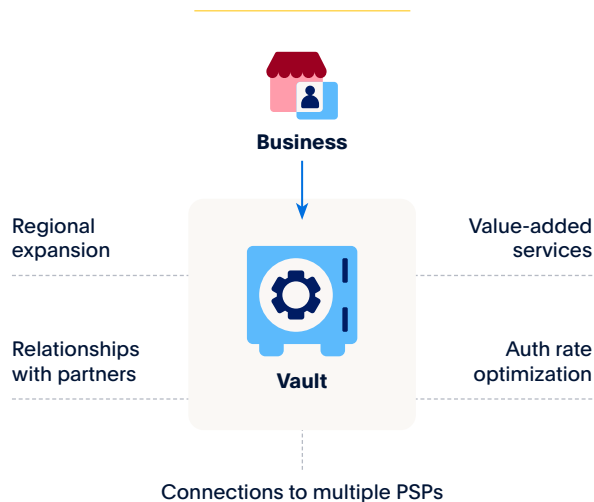
- **Expanding reach.** Large businesses usually work with multiple payment service providers (PSPs) to ensure business continuity should one PSP experience an outage. Orchestration helps businesses connect to many PSPs from one secure connection. A vault is central to enabling this orchestration. Vaulted

payment data can be seamlessly shared so businesses can easily route transactions to any PSP they choose, for any reason.

- **Driving conversion.** A vault can help reduce cart abandonment and create a frictionless checkout experience by enabling a card to be automatically presented to a customer. And a vault securely stores sensitive payment data like business-specific network tokens. These network tokens are assigned by the networks, so networks view them as more secure and can quickly approve transactions associated with their network tokens. Higher authorization rates can translate into more completed transactions – and more revenue.
- **Increasing efficiency.** Just as a vault can store a customer's information, it can also safely store data on sellers – critical for enabling payouts. A vault helps ensure payments can be processed quickly, securely, and reliably.

Delivering an exceptional customer experience on the front end requires a powerful back end tailored to a business's needs – with a vault at its core.

Scale with a Centralized Vault

Business

Regional expansion

Value-added services

Relationships with partners

Auth rate optimization

Vault

Connections to multiple PSPs

Adam Hachtel
Senior Product Manager, PayPal

Mindy Chon
Lead Product Manager, PayPal

Card processing: Past, present, and future.

By Jon Krauss and Jay Mok

Globally, credit and debit cards (49%) are the most trusted payment methods among consumers, followed by digital wallets (40%).[1] That means card processing, or card-on-file processing, should remain a top priority for large, global businesses.

Beyond processing cards, payment service providers (PSPs) work to help businesses improve their conversion rates and costs – and have traditionally done this by offering lower processing costs than the competition. However, in recent years, PSPs have strengthened their value-added services to help drive conversion and encourage growth.

The future of a PSP's card processing offering is deeply intertwined with the suite of value-added services it can offer. Services like payments orchestration capabilities and fraud management tools can help businesses increase customer conversion, lower costs, and even find new customers. With the right data, some PSPs can help open doors to new customers at precisely the right time or in new regions.

PSPs also offer strategic value to their large business customers through their knowledge of and influence over card network relationships. As networks impose additional card-processing rules and fees, PSPs can help businesses navigate these new realities, and they can advise on how to best manage overall processing costs.

PSPs have access to a treasure trove of customer and transaction data. Many already leverage the data to build and offer additional services. As a large global business, consider working with a payment solution with the scale, data, and relationships to optimize conversion and costs – even beyond card processing.

> "
> While the payments landscape continues to evolve, one thing is certain – card processing is still king. Priority number one remains the same for large global businesses today: Provide a seamless checkout experience that improves conversion at the lowest cost.
>
> – Jon Krauss

Jon Krauss
Head of Braintree Product Operations and Strategy, PayPal Braintree

Jay Mok
Director of Product Management, PayPal

[1] IDC InfoBrief, sponsored by PayPal, "Do Retailers Really Know What Digital Shoppers Want?" Doc. # US49041822, May 2022. The survey conducted by IDC among 505 large enterprises and 10,054 consumers in five markets (United States, United Kingdom, Australia, Germany, and France).

Treasury services at scale.

By Avi Reddy

An authorized transaction is just one step in the journey. Other important lifecycle events still need to occur. Businesses want quick access to their payment data so they can manage their customers' orders, payments, and subscriptions. And they want money in their accounts as quickly as possible so they can pay their bills.

In the post-processing world, payment service providers (PSPs) should be supporting businesses to achieve these goals through:

- **Funding.** PSPs should be orchestrating the most efficient way to move money to a business's bank account and make payouts to multiple sellers or suppliers. In many cases, this means establishing local relationships to hasten the process and avoid cross-border fees.
- **Pricing.** Massive payment volume leads large global businesses to shoulder significant transactional expenses. A PSP should be influential in working with networks, knowledgeable about fee structures, and transparent with its pricing to help businesses minimize their fees.
- **Dispute management.** A large business's fraud and chargeback volume increases as its e-commerce volume grows. From a data and coverage perspective, PSPs are in a strong position to help businesses protect their revenue by arbitrating and presenting evidence to networks and bank issuers. And on the technical side, PSPs can help standardize the way a business manages disputes around the world and across payment methods.

Post-processing trends are dependent on the larger macroeconomic environment – higher interest rates, for example. But the demand for faster access to funds and payments data is constant and will continue to shape the services PSPs provide for e-commerce businesses. PSPs can differentiate themselves with full-suite offerings that provide payments processing, treasury services, data insights, and possibly lending services as well.

Avi Reddy
Director, Post Processing,
PayPal

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Businesses are demanding faster access to funds and payments data. It's symptomatic of the current macroeconomic environment, but we expect this trend to continue.
– Avi Reddy

Integrating with PayPal Braintree.

By Mudita Tiwari

> " Large businesses, developers, and customers want choice and control, and that's exactly what payment solutions should deliver.
>
> – Mudita Tiwari

Developers expect a payments integration to be a seamless experience for them and their customers. Large global businesses tell PayPal Braintree that their developers want payment choices, ease of integration, security, and reliability and stability in their payment integration experience, and that's what PayPal Braintree can deliver.

Businesses choose PayPal Braintree because it keeps them in control of their organizations. PayPal Braintree supports a variety of payment methods around the world, empowering businesses to pick and choose what they want to offer their customers. PayPal Braintree also delivers choice in implementation, whether it's a server SDK or application programming interface (API) implementation for mobile or web experiences. Developers can decide what's best. Comprehensive documentation and a robust sandbox environment to test payment integration are key to helping developers handle integrations more efficiently.

Beyond offering these choices, PayPal Braintree delivers value-added service solutions by providing checks and balances and controls, like offering additional layers of authentication during the checkout process.

As business needs have changed, PayPal Braintree has responded. We've evolved our expertise, tools, and proven solutions to give large businesses the front-end and back-end payments experiences they want – all while focused on helping businesses maximize their profitable growth. PayPal Braintree provides developers with a powerful payment solution and peace of mind while handing sensitive information. Get a customized payments infrastructure from a versatile product set, built by industry trailblazers.

Mudita Tiwari
Senior Product Director,
Developer Experiences, PayPal

Drive Conversion

- ▶ The power of a unified solution.
- ▶ Preventing lost sales with account updater tools.
- ▶ Improving authorization rate performance with network tokens.
- ▶ To retry or not to retry.
- ▶ Developing an authentication system.

The power of a unified solution.

By Sandipan Chatterjee and Purnima Chaudhry

Businesses need to adapt to changing economic environments, evolving customer preferences, and new ways to shop. The transaction authorization rate can be a barometer of their success. They want to deliver top-notch customer experiences that enable more-successful transactions without incurring incremental fraud and chargebacks.

The authorization rate is the percentage of transactions that successfully complete a checkout process. High auth rates mean more transactions are approved. This drives incremental revenue and encourages repeat customers.

For a large business, a change of a few basis points in its authorization rate could result in up to millions in additional revenue. Think of what that additional revenue could fund: a new project, more product development, or global expansion.

Businesses can benefit from a powerful payment solution with a suite of intelligent authorization rate optimization tools that include:

- **Account updater.** Keep a customer's stored card credentials updated without any work from the customer or business – to easily complete transactions and minimize declines due to stale, old, or lost cards.
- **Network tokens.** Keep customer payment information secure with credentials that are substitutes for the actual card numbers, which receive updates to help prevent declines and can benefit from higher authorization rates.
- **Smart retries.** Leverage machine learning (ML) to create an optimal retry strategy. ML should balance transaction costs and auth rates to help recover transactions.
- **3D Secure (3DS).** Dynamically invoke 3DS by use case or region to help improve auth rates and weed out fraudsters.
- **Fraud management.** Effective fraud management helps keep out bad users and at the same time enables your good customers to complete their payments successfully.

When working together, these tools can help a business combat declined transactions, fraud, and chargebacks – all while delivering a streamlined experience for its customers and helping drive authorization rates.

Auth Rate Optimization Tools

1
Account updater
Securely store customer card credentials, keep them up to date, and minimize declines due to stale, lost, or stolen cards.

2
Network tokens
Replace traditional PANs with secure equivalents that receive real-time updates and help minimize lifecycle management declines.

3
Smart retries
Leverage machine learning to intelligently retry declines by examining various types of customer and payment data.

4
3D Secure (3DS)
Dynamically invoke 3DS to get an extra authentication layer, help improve auth rates, and meet SCA requirements.

5
Fraud management
Manage risk with powerful machine-learning tools that let you choose your risk tolerance and help reduce false declines.

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Delivering an exceptional front-end customer experience and optimizing back-end payments performance can each drive revenue – but looking at both is critical to maximizing revenue.

– Purnima Chaudhry

Sandipan Chatterjee
Senior Director of Product Management and Head of Payments Optimization, Orchestration, and Risk; PayPal

Purnima Chaudhry
Director of Product Management, PayPal

Preventing lost sales with account updater tools.

By Ellen Reeder

Account updater tools keep customer credit and debit card information, or primary account numbers (PANs), fresh in their vaults. When there are changes in information such as numbers, expiration dates, and account status, the data in your vault is updated, helping prevent unnecessary declines and avoiding the need for additional customer interaction.

Using account updater tools helps businesses:

- **Improve conversion.** A payment provider that offers account updater tools uses its relationships with card networks to check for PAN updates in the back end – even before a customer starts a transaction. Updating card details helps reduce friction at checkout, which can prevent cart abandonment. And businesses benefit from fewer declined transactions caused by outdated credentials, which can also help drive authorization rates.
- **Save time.** Account updater tools automatically update a customer's payment information should it change or become out of date – saving the business from the time-consuming and cumbersome task of asking the customer to enter the correct details at checkout.
- **Store data securely.** Card information is securely stored in a vault, protecting your customers' data while requesting and receiving updates to your vault.

If a business accepts credit and debit card transactions, it should take advantage of account updater tools to help identify outdated card information and prevent lost sales.

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Account updater tools stay deep in the back end, but their impact can't be overstated on the front-end customer checkout experience. They ensure saved credit and debit card information is continually updated on the business's side, so returning customers never have to worry about re-entering their card credentials. More seamless payments. One less barrier to buying.

– Ellen Reeder

Ellen Reeder
Product Manager, PayPal

Improving authorization rate performance with network tokens.

By Jim Judd and Annika Begley

Businesses want to offer secure payment experiences that drive authorization rates, reduce friction for customers, and capture incremental sales. Network tokenization is one way that organizations can achieve this.
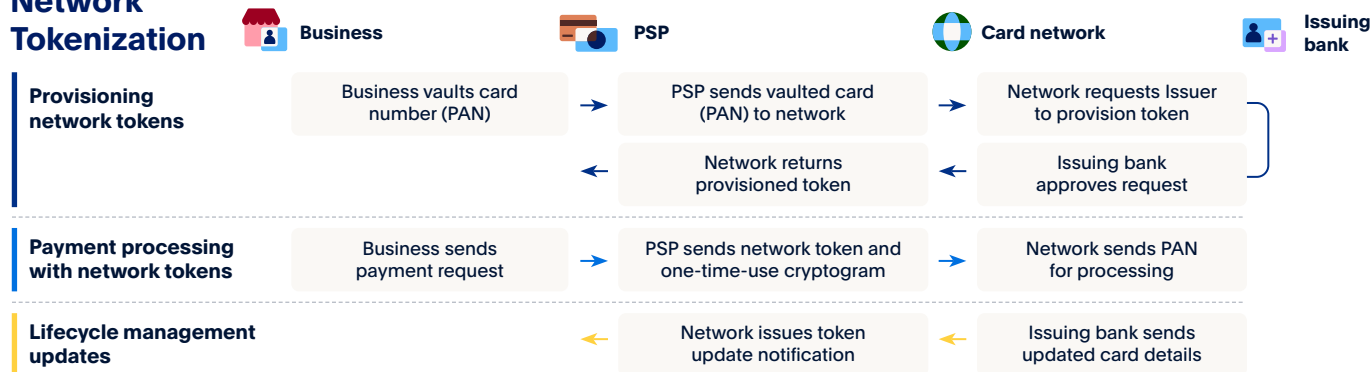
Network tokenization replaces a primary account number (PAN) with a business-specific token that can only be used to transact at that particular business. One PAN can be used to create many business-specific tokens. Card networks like Visa and Mastercard issue these network tokens to payment processors, who maintain them. If a credit card is lost, stolen, or expires, the token can be updated in real time and still be used.

> " If we can move away from less-secure primary account numbers, we can imagine a payments world where we minimize fraud, boost authorization rates, and maximize revenue. It's possible with network tokenization.
>
> – Jim Judd

Network Tokenization

|	Business	PSP	Card network	Issuing bank
Provisioning network tokens	Business vaults card number (PAN) →	PSP sends vaulted card (PAN) to network →	Network requests Issuer to provision token	
	← Network returns provisioned token	← Issuing bank approves request		
Payment processing with network tokens	Business sends payment request →	PSP sends network token and one-time-use cryptogram →	Network sends PAN for processing	
Lifecycle management updates		← Network issues token update notification	← Issuing bank sends updated card details	

Network tokens can help:

- **Provide a secure way to share data.** Network tokens are stored in a centralized vault and can only be decrypted by the card network that generated the token. They are unique to every customer card and are not shared between any two businesses, helping to reduce the effectiveness of stolen cards.
- **Drive authorization rates performance.** Since network tokens can be continually updated, even when a card's details change, transactions are less likely to be declined – which helps increase authorization rates. Network tokens also provide additional information to issuers and are authenticated using details specific to each business, which helps increase an issuer's confidence and the probability that a transaction will be approved. Issuers may also be more likely to approve transactions using network tokens because they consider them to be more secure.
- **Reduce interchange fees.** Businesses that use network tokens may see reduced interchange fees, as some card networks may charge a higher rate for non-token transactions.

While issuer adoption is the primary driver of network tokenization, we believe this will be the standard for processing card-on-file transactions in the future – bringing to reality a future of token-first payments.

Jim Judd
Senior Product Manager, PayPal
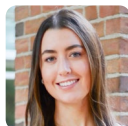
Annika Begley
Technical Product Manager, PayPal

To retry or not to retry.
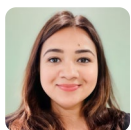
By Sana Haque and Devang Gaur

The concept of retrying a declined transaction isn't new. Businesses understand that a declined transaction can lead to an abandoned shopping cart. Retrying can potentially recover a transaction, helping businesses complete more orders and drive revenue. But each transaction retry can carry an additional fee. Excessively retrying transactions can quickly lead to high operating costs.

Businesses should look for smart retry strategies that support positive customer experiences without raising costs. An optimized retry process can mean fewer interruptions for customers which helps create a smoother checkout experience. This is crucial for customer retention and loyalty, while reducing fees for unoptimized payment retries.

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> **Machine learning is driving a new era of customer insights that can help optimize payment processing – particularly when it comes to enhancing how and when to retry declined transactions. Intelligent payment retries can help businesses drive revenue, boost authorization rate performance, and manage costs.**
>
> – Sana Haque

Artificial intelligence and machine learning are transforming how and when transactions should be retried. Traditionally, a retry strategy was based on predetermined parameters and followed a specific path. Now, with machine learning, a transaction can be retried more thoughtfully. By examining patterns in previously declined transactions, intelligent decisions can be made about whether to retry a transaction based on how likely it is to be accepted. As these technologies access more data over time, they get smarter about determining when a retry would be valuable. Using these intelligent retry solutions can help reduce the overall number of retries, minimize costs, and increase transaction success rates.

The future of how and when to retry a transaction is increasingly complex as networks look to curb excessive retries by imposing fines on retry attempts. It's imperative that businesses work with payment solutions that have relationships with card networks so they can better understand how to optimize their retry strategies.

Smart payment retries are integral to the overall payments strategy for large global businesses. Frictionless checkout experiences, more transactions, and high authorization rates await.

Sana Haque
Senior Technical Product Manager,
PayPal

Devang Gaur
Product Manager,
PayPal

Developing an authentication system.

By Vik Westermann

" Customers are progressively valuing authentication features as a vital component in the broader payments story. The general expectation for authentication is on the rise, leading to a growing interest in tailored authentication for specific scenarios. It seems we're moving towards the idea of an advanced 'authentication system.'

– Vik Westermann

New standards and tools are consistently emerging, and the authentication process has accordingly evolved from one-time password requests to much broader identity and authentication solutions. Increasingly, the strategy is to capture a large number of data elements to validate identities, and use machine learning to select the necessary type of authentication. This can help businesses:

- **Increase authorization and conversion rates.** A bank is more likely to approve a transaction with a strong customer authentication credential attached to it, leading to higher authorization rates and increased conversions.
- **Maintain regulatory and network compliance.** Regulatory requirements are always changing, and payment service providers (PSPs) can leverage local acquiring licenses and third-party partnerships to help businesses comply with country-specific authentication requirements. PSPs can also leverage the large volume of transactions they run through a network to develop specialized and up-to-date knowledge of network requirements.
- **Combat fraud.** More-sophisticated authentication solutions have never been more necessary as the use of generative AI skyrockets. PSPs should be using industry-leading tools to confidently decline transactions from bad actors and approve transactions from trustworthy customers, decreasing the number of costly and time-consuming chargebacks.
- **Customize an authentication solution.** As the expectation for authentication increases, so does the ability to develop authentication solutions that fit a business's strategy. 3D Secure 2 is a

prominent authentication tool, but it's one of many. PSPs can help a business develop intelligence around which authentication tool to use for different transaction types and circumstances. PSPs can also use machine learning to determine which customers are trustworthy and which customers need to be run through a strong authentication flow. This can all help a business optimize its authentication flow by creating a powerful "authentication system."

Vik Westermann
Senior Product Manager, PayPal

Expand Your Reach

- ▸ Expanding checkout and accepting more ways to pay.
- ▸ Unifying multichannel commerce.
- ▸ Unlocking the power of orchestration.
- ▸ Optimizing multiple PSPs through orchestration.
- ▸ Orchestrating a path to borderless commerce.

Expanding checkout and accepting more ways to pay.

By Shirish Kandekar and Aurora Qiu

Many businesses are looking to expand their customer reach into new global markets, but each market has its own payment preferences. It's up to businesses to cater their checkout experiences to each specific market.

This is what alternative payment methods (APMs) were made for: giving people the payment methods they want, while empowering businesses to expand their reach and drive conversions around the world. APMs are used as alternatives to traditional credit and debit cards. They include local payment methods (LPMs), which allow customers to pay with banks, digital wallets, or other means that operate only in specific regions of the world.

Choosing the right payment methods in each new market can be overwhelming to any organization. Businesses need a trusted payment provider that can advise them on the right mix of LPMs to offer in each region – whether it's digital wallets, bank redirects, vouchers, or direct banking transfers. And they need a payment solution that can handle the seamless integration of these methods.

A payment solution can also help a business navigate the adoption of payment methods based on bank transfers (account-to-account payment methods), which are gaining ground in countries outside the United States. These APMs have lower processing costs than credit cards, which can help businesses grow while keeping costs low. The rise of open banking will encourage further adoption of bank-transfer-based payment methods.

Businesses must adopt comprehensive APM strategies that include popular LPMs and digital wallets, and they must be nimble enough to alter their APM mix as they grow. To deliver the ideal checkout experience, payment method quality – or relevance – may trump quantity.

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A business can grow its bottom line when it offers more ways to pay. And with customer preferences continuously evolving, it's up to businesses to stay on top of their exact mix of payment methods in every single market. Push the hard work to a payment provider with industry relationships around the globe – and the technical capabilities to add new payment methods without additional integration work.

– Shirish Kandekar

Shirish Kandekar
Lead Product Manager, PayPal

Aurora Qiu
Product Manager, PayPal

Unifying multichannel commerce.

By Per Anell and Kumar Gunasekaran

> "Turn browsers into buyers with shopping experiences that are tailor-made for each individual customer – whether they're online or in person. Unified commerce retail strategies can give businesses the data-driven insights they need to turn this into reality.
>
> – Per Anell

Businesses have long used technology to deliver frictionless shopping experiences for their online customers. But it's also paramount to deliver the same seamless experiences for these online customers when they're actually in stores – or switching between the two with technologies such as contactless payments.
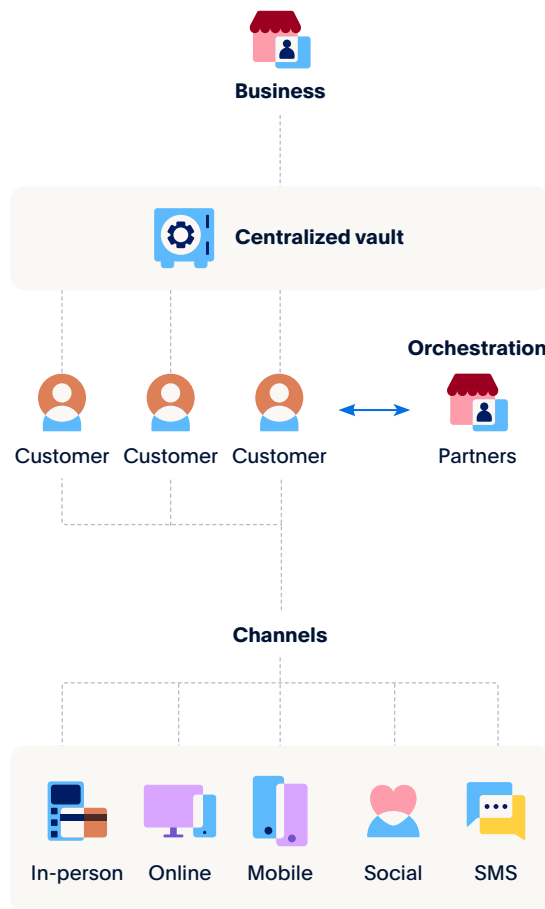
A retail strategy that focuses on unified commerce helps to create a consistent shopping experience across all channels for each customer, whether they're shopping online, in store, or even calling into a business's call center. Businesses need a unified view of their customers' behaviors and preferences – which is precisely what a payment solution with omnichannel capabilities can offer.

Enabled by one centralized vault containing all in-person and online customer payment data, an omnichannel-focused payment solution can turn payment data into personalized customer profiles – which could include previous purchases, payment methods, rewards status, favorite items and brands, and more.

Such profiles can help a business tailor a customer's online and in-person experiences. A business can use this data to offer rewards or loyalty perks. These data-driven insights can even help businesses tailor their marketing to the right customers for services like "buy online, return in store" or "buy online, pick up in store." The possibilities are many.

Creating a unified view of a customer across multiple channels can help businesses deliver conversion-driving shopping experiences that can drive results.

Omnichannel Shopping: Unified Commerce

Business

Centralized vault

Customer   Customer   Customer

Orchestration

Partners

Channels

In-person   Online   Mobile   Social   SMS

Per Anell
Director of Product Management, Omnichannel, PayPal Braintree

Kumar Gunasekaran
Senior Product Manager, PayPal

Unlocking the power of orchestration.

By Carol Schimmelpfeng

An effective payments orchestrator can be the difference between stagnation and global growth.

Beyond integrating and managing payment providers on a business's behalf, a payments orchestrator should enable business continuity and overall optimization efforts, while handling the complexities of multiple tech stacks. This frees up the business to focus on its strategy, which often means ambitious global expansion.

Through one integration, a payments orchestrator can open the business to as many microservices and payment service providers (PSPs) as they want or need – now and in the future. And this is done without spending engineering or product management resources to integrate each service provider on its own.

A payments orchestrator helps a business execute its payments strategy, and can help:

- **Facilitate global expansion.** Because an orchestrator can connect with PSPs in specific countries, a business may be able to offer relevant, regional payment methods. By offering preferred payment methods, businesses can deliver personalized shopping experiences that help streamline checkout and increase conversions. This also means a business doesn't need to spend its own time and resources building these connections.
- **Optimize payment routing**. Most large businesses work with multiple PSPs. When one PSP is performing better than another, an orchestrator can direct traffic to the better performer, as well as retry a failed transaction to increase auth rates.
- **Provide business redundancy.** Working with multiple PSPs also ensures business continuity should one PSP fail. An orchestrator can route to another PSP and retry a transaction without impacting the front-end payment experience for a cardholder.
- **Standardize reporting.** Managing multiple PSPs can present data reconciliation complexities.

Benefits of Orchestration

Orchestrator

- Facilitate global expansion
- Optimize payment routing
- Provide business redundancy
- Standardize reporting
- Offer value-added services

An orchestrator can help standardize and consolidate reporting and reconcile differences across multiple PSPs.

- **Offer value-added services.** Orchestration allows businesses to offer additional, third-party e-commerce services without complicating the checkout experience. A travel company could offer cardholders the ability to purchase trip insurance from another business while booking a vacation package, all in one checkout experience.

Businesses with ambitions to expand to new markets, while optimizing their operations and costs, will benefit from a payment service provider that can manage payments orchestration on their behalf. Orchestrators can help deliver a smooth payment experience, while businesses can focus on scale and growth.

> "
> The ideal payments orchestrator will help manage the many microservices that make up a business's payments ecosystem, allowing businesses to focus on scalability and growth.
> – Carol Schimmelpfeng
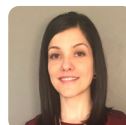
Carol Schimmelpfeng
Product Director, Vault, Extensibility, and Orchestration; PayPal

Optimizing multiple PSPs through orchestration.

By Irina Nichol

Large global businesses have complex payments systems. Multiple payment service providers (PSPs), multiple fraud management tools, and even multiple vaults can all be part of one business's payments setup. As businesses expand to grow their businesses, they often add more tech systems and third-party vendors, creating increasingly complex operating models.

It is these large global businesses that stand to benefit from payments orchestration. Orchestration helps them automate the management of their increasingly complex, end-to-end payments network. This can translate into cost savings, as businesses could better maximize their resources, focus internal teams to manage these networks, and help realize additional benefits from value-added services from their PSPs.

For large businesses that work with multiple PSPs for payment processing redundancy, a payment solution with orchestration capabilities can help optimize these service providers' performances – all while helping take the management burden away from businesses. Orchestration can also help mitigate the risk of a payments system outage. Should one PSP fail, payment processing can easily be routed to another PSP.

Multi-PSP payments optimization can also translate into cost savings when it comes to payment processing. PSPs can charge different fees for different transaction types. An orchestrator can help route transactions to specific PSPs to help minimize overall costs. A business just needs to share its specific payment processing goals with an orchestrator, and the orchestrator can build the logic for optimized transaction routing.

Challenges with multi-platform reality
- ➤ Multiple, complex integrations
- ➤ Management of multiple vaults
- ➤ Limited vault sharing
- ➤ Duplicate costs for vault freshness tools
- ➤ Inability to scale quickly

Benefits of centralized vaulting and orchestration
- ➤ Reduce tech and integration costs
- ➤ Unlock routing options with a variety of PSPs
- ➤ Expand with access to local markets
- ➤ Enable broader customer reach and engagement
- ➤ Provide redundancy options

By automating back-end processes, orchestration can help large businesses continue to grow without increasing the complexity of their payments systems. Businesses can diversify their payments platforms, while managing redundancy and risk – all while remaining competitive with costs and performance.

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Smart multi-PSP strategies are possible with orchestration. Large global businesses with complex payment setups can rely on orchestration to optimize payment processing and get the most out of their back-end systems. They can get the support they need to thrive.

– Irina Nichol

Irina Nichol
Irina Nichol, Head of Product,
Braintree Processing, PayPal

Orchestrating a path to borderless commerce.

By Mindy Chon and Sam Sherman

Businesses want to meet customers around the globe. Orchestration can play a pivotal role in empowering them to enter new markets faster and more efficiently – while lowering costs and reducing technical debt.

Instead of connecting with a local payments processor in every new market, a business can simply connect to one provider who can orchestrate connections to processors worldwide. Businesses avoid the lengthy, costly development work of building out a local connection: An orchestrator can connect with the processor on the business's behalf, reducing a process that could take six months to six weeks.

Businesses may also eliminate hefty cross-border fees for each transaction by processing locally via an orchestrator. Let's say a Brazilian customer wants to use their preferred payment method – a regional credit card – but the business can't process the transaction locally. This transaction would likely need to be processed by a US bank connected to the business's payment processor. That bank may decline the overseas transaction, or accept it but charge a cross-border fee. With a payment orchestrator that has local connections, this transaction could have been processed locally.
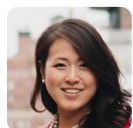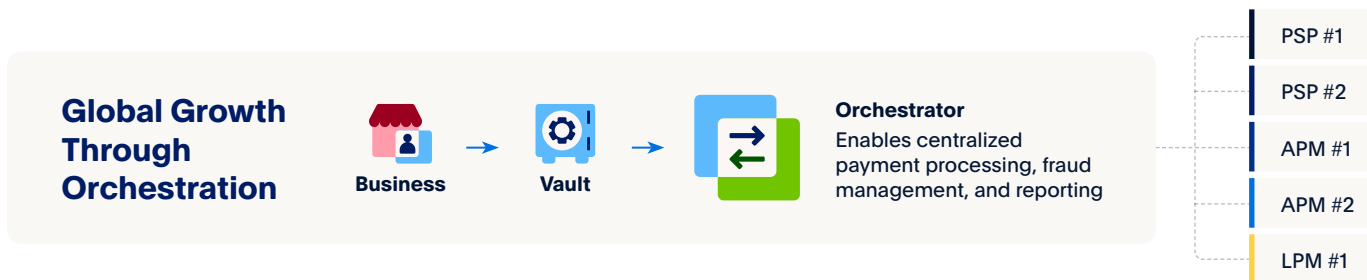
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Orchestration can provide an opportunity to deliver a global commerce experience. Instead of connecting with many local payments processors in every new market, a business can leverage its one connection to its orchestrator to get started. Instead of connecting to many, you're connecting to one. A six-month integration process can be done in six weeks.
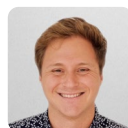
– Mindy Chon

Establishing local relationships can also help a business increase its authorization rates. Since regional banks are more familiar with local credit cards and payment methods, they are more likely to approve the transaction.

For businesses that want to reach more global customers, it's imperative to have an orchestrator that can connect with as many local processors as possible. Orchestrators can quickly get businesses up and running in new markets and help lower costs. When it comes to payment processing, orchestration is the key to truly borderless commerce.

Global Growth Through Orchestration

Business → **Vault** → **Orchestrator**
Enables centralized payment processing, fraud management, and reporting

PSP #1
PSP #2
APM #1
APM #2
LPM #1

Mindy Chon
Lead Product Manager, PayPal

Sam Sherman
Head of Payments Orchestration Solutions, PayPal

Help Mitigate Risk

- ▶ Leveraging data to manage fraud.
- ▶ Using intelligent tools to minimize costly chargeback volume.
- ▶ Creating operational efficiencies with dispute automation.

Leveraging data to manage fraud.

By Sandipan Chatterjee

> "Smart businesses will seek fraud management capabilities that can help them recognize fraudsters and their purchase patterns without sacrificing the good customers.
>
> – Sandipan Chatterjee

Every business's goal is to create ideal shopping experiences that capture the most sales. While businesses focus on easing the shopping experience for their target customers, they may also be easing the shopping experience for potential fraudsters. Simplifying checkout for good customers also makes it easier for bad actors to defraud.

Global fraud management is not about eliminating fraud altogether – an impossible feat. Rather, global fraud management is about flagging as many fraudulent transactions as possible, while impacting the fewest number of good customers. Finding the right balance – and using machine-learning technology – is key.

The total cost of e-commerce fraud to businesses is expected to exceed $48 billion globally in 2023, from just over $41 billion in 2022.[2]

Data on purchase history, device used, card type, and location play a role too. They can all help a payment service provider (PSP) determine whether a transaction using a credit card that was linked to a fraudulent transaction from a different business will likely be fraudulent too.
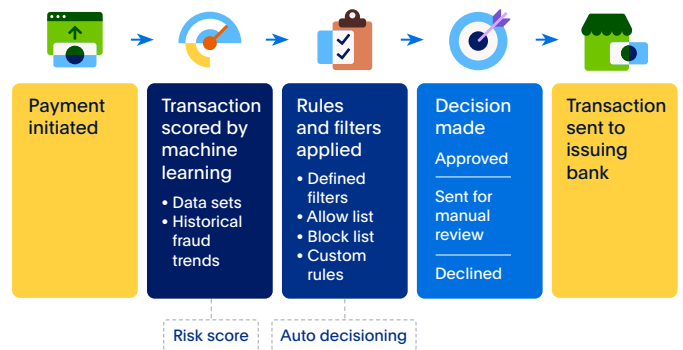
By using machine learning to profile ever-changing purchase patterns, PSPs can identify potentially risky customers and transactions and present this information to businesses. They examine purchase data and turn them into actionable insights for the business – a true value-add and confidence-

Intelligent Fraud Management with Machine Learning

| Payment initiated | Transaction scored by machine learning • Data sets • Historical fraud trends | Rules and filters applied • Defined filters • Allow list • Block list • Custom rules | Decision made Approved ——— Sent for manual review ——— Declined | Transaction sent to issuing bank |

Risk score   Auto decisioning

boosting service. And because PSPs analyze purchase patterns – not people – they can arm businesses with the right information to help curb fraud while maintaining customer privacy.

A business that focuses on eliminating all fraud itself is not sustainable in the long term. Without intelligent fraud management tools, customers would theoretically have to complete time-consuming security checks. If this is the case, you risk losing your customers to a competitor with a simpler shopping experience. It's possible to deliver a seamless experience that drives sales without fraudsters eating away at revenue. Intelligent fraud management tools are powerful ways to weed out those bad actors and keep businesses in control of their systems.
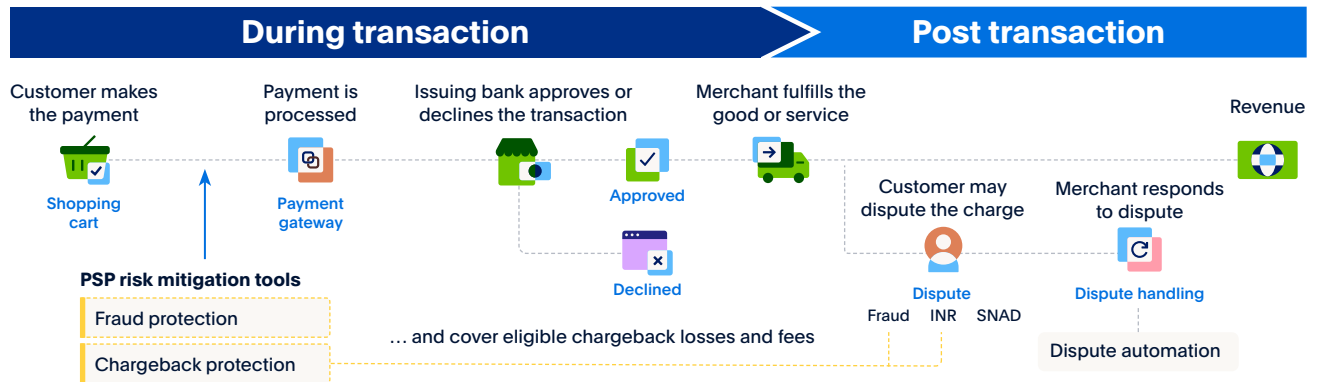
Sandipan Chatterjee
Senior Director of Product Management and Head of Payments Optimization, Orchestration, and Risk; PayPal

[2] eCommerce Losses to Online Payment Fraud to Exceed $48 Billion Globally in 2023, Juniper Research, October 2022.

Using intelligent tools to minimize costly chargeback volume.

By Arpit Kumar

When a customer can't resolve a dispute directly with a business, they can file a post-transaction payment dispute – or chargeback – where they ask for a transaction reversal from their debit or credit issuer. It could be that a product never arrived or there was an unauthorized transaction. Whatever the reason, businesses try to avoid chargebacks as they're expensive and quickly eat away at profit margins.

After a customer initiates a chargeback event, the disputed amount plus a chargeback fee is typically taken from the business's account. The business then has to provide documentation to "win back" the disputed amount.

The process of contesting a chargeback is time consuming and cumbersome. Completing contestation documents can take several hours, and each issuer has its own requirements and guidelines. It is often unclear how to win a chargeback, and there are no guarantees of success.

Payment service providers (PSPs) can help businesses minimize chargebacks by helping them decide whether a transaction should be approved or denied in the first place. With PSPs, businesses can get:

- **Fraud protection.** PSPs can use risk mitigation tools to analyze every transaction in real time, leveraging a large amount of transaction data and machine learning. This can help reduce the risk of fraudulent transactions and increase the

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Chargebacks are extremely frustrating for businesses – as well as being time consuming, they reduce profit and involve a lot of uncertainty. Ideally, businesses put measures in place to minimize fraud and rely on experts who can help navigate a complicated chargeback environment.

– Arpit Kumar

authorization rate of good customers. Fraud filters can be set to match a business's unique risk tolerance and business needs.

- **Chargeback protection.** Making intelligent transaction-approval decisions to prevent fraud is always the first step, but when chargebacks do occur, PSPs can help reduce operational costs by taking on the burden and liability of certain types of chargebacks.
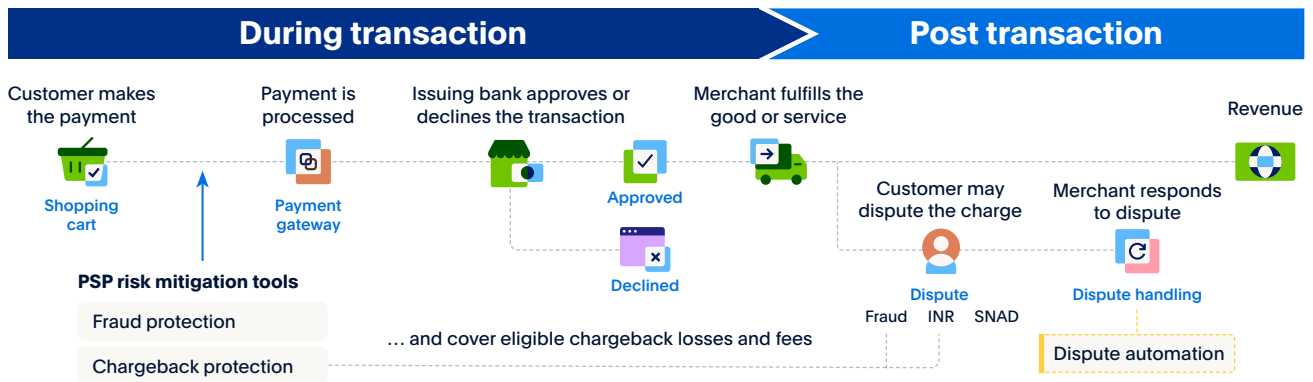
In addition to being costly and frustrating, chargebacks are also potentially damaging to a business's brand, so PSPs should be using a wide range of intelligent tools to help businesses mitigate the ever-evolving risks associated with fraud and chargebacks.

Arpit Kumar
Product Management Manager, PayPal

Creating operational efficiencies with dispute automation.

By Arpit Kumar

During transaction	Post transaction

Customer makes the payment
Payment is processed
Issuing bank approves or declines the transaction
Merchant fulfills the good or service
Revenue

Shopping cart
Payment gateway
Approved
Declined

Customer may dispute the charge
Merchant responds to dispute

PSP risk mitigation tools

| Fraud protection |
| Chargeback protection |

… and cover eligible chargeback losses and fees

Dispute
Fraud   INR   SNAD

Dispute handling

Dispute automation

It's easy for a customer to initiate a chargeback, and when they do, they typically get the disputed amount returned to their account immediately. This leaves the business at a loss, but it's often unclear if contesting the chargeback is worth the time and effort. How should a growing business respond to an increasing number of disputes?

When it comes to fraud and chargebacks, businesses are often understaffed and unsure of how to complete complex contestation documents. And every financial institution defines its own policies and has its own version of a dispute form. The rules are constantly changing.

This is where payment service providers (PSPs) can help. When a PSP processes a large transaction volume, it typically also handles a large number of disputes. The PSP likely has relationships with multiple issuers and a solid understanding of what

documentation to present to increase the chances of winning each chargeback case. All of this knowledge and powerful technology help PSPs turn a time-consuming, manual dispute process into one that is templatized and automated. The right dispute automation solution can help business to:

• Centralize dispute management
• Free up employee time
• Decrease operational costs
• Increase win rates and recover chargeback revenue
• Scale with a growing transaction volume

The bottom line: The technology exists for businesses to save time and money by automating disputes.

Arpit Kumar
Product Management Manager, PayPal

> "
> **Chargebacks are expensive and can't be ignored, but a business should focus its time on growing and managing the business, not disputing chargebacks.**
> – Arpit Kumar

Simplify Payouts

▶ **Enabling fast, reliable payouts to global sellers.**

Enabling fast, reliable payouts to global sellers.

By Michael Ting

More global businesses are looking to efficiently disburse payments to large communities of recipients, thanks in part to the enduring popularity of the gig economy and marketplace companies that connect buyers and sellers.

Businesses want to deliver seamless shopping experiences to their customers and positive payment payout experiences to their sellers. Payment service providers (PSPs) have an opportunity to help large businesses deliver both experiences.

Working with a provider on payouts can help businesses pay global sellers quickly through local banks –and deposit those funds right to sellers' own bank accounts. Since these payments are processed locally, businesses don't have to worry about hefty cross-border fees. They can pay their sellers as frequently as needed – even daily. This helps increase the efficiency of their payment processing.

Beyond enabling fast and reliable payouts to sellers en masse across many markets, an integrated payouts provider can help a business:

- **Avoid the burden of a complicated payments architecture.** Businesses don't need to build and maintain payments infrastructures that would need connections to multiple PSPs to reach their global users. A solution with payouts platform technologies can handle the administrative workflow and cash management.
- **Sidestep the complexity and costs of global fraud management and data compliance.** Entering each new market creates more data to use and store, which means new risk factors and compliance requirements. A payments provider can shoulder this work so businesses don't have to focus on them.

- **Deliver choices to sellers, which can maximize retention.** Using a robust payouts platform that lets businesses offer choices to its sellers can make the difference between a seller choosing to work with you or a competitor. Businesses can let their sellers choose how and where they want to receive their money, in what currency, and even how fast.

Businesses are quickly growing internationally, oftentimes faster than they predict. This speed puts pressure on them to have reliable and more globally distributed payout capabilities that can move money fast. Lean on a payment solution with global payouts capabilities to disburse local payments.

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Payouts are central to the value proposition of many large global businesses, where paying sellers is at the heart of what they do. Finding a solution with the relationships and capabilities to disburse payments locally is key to ensuring secure, reliable payouts. Businesses can operate efficiently, keep sellers happy, and scale the business without scaling the challenges.

– Michael Ting

Michael Ting
Head of Product, Payouts, PayPal

PayPal

PayPal Braintree is an end-to-end payment platform built for growth.

We provide the global commerce tools needed to deliver seamless checkout experiences at scale. Our proven solutions are informed by PayPal's global network and can be adapted to your business infrastructure, giving you confidence to thrive in an ever-changing world.

Payment processing made simple.
From optimizing your processing tools to leveraging PayPal's industry relationships around the globe, PayPal Braintree can help boost your business with a robust, connected processing platform.

A tech stack that puts you in control.
Delivering an exceptional customer experience on the front end requires a powerful back end that's tailored to your needs. PayPal Braintree can help optimize your customer experience quickly and at scale with intelligent and agile optimization.

Intelligent authentication to help maximize approvals and minimize declines.
We can help you boost your auth rate performance with tools and features that intelligently keep cards up to date and leverage machine learning to intelligently retry declined transactions to help increase transaction recovery.

Effective fraud management.
We help you protect your business with an integrated and customizable suite of fraud tools, including risk services like Fraud Protection and Dispute Automation.

Discover how PayPal Braintree can help you evolve your payments for profitable growth.

Our sales and support teams are here to answer your questions.

Connect with Us