

PayPal

# How AI is transforming retail payments

For a fast, more  
personalized retail journey



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Every transaction tells a story. Behind each purchase sits a trail of data that, with the right tools, can predict what customers want next.

Retailers that put AI and predictive analytics to work are turning that data into action, powering fast checkouts and personalized experiences that can help convert.

**75% of retailers now consider AI agents crucial for maintaining a competitive edge.<sup>1</sup>**



# AI-powered retail experiences are the new norm

AI is reshaping how retail payments are made and managed. For leading US retailers, the technology is becoming essential to delivering the personalization today's shoppers expect.

## Making payments personal

AI-powered engines analyze browsing, purchase, and engagement data to tailor recommendations to consumers, whether it's offering the right payment option or, highlighting Buy Now Pay Later at the right moment.



## Stopping fraud before it starts

Payment fraud remains one of retail's biggest challenges, costing US merchants billions each year. Advanced algorithms and AI models offer the opportunity to rapidly detect suspicious activity as it happens, learning from patterns across millions of transactions.<sup>2</sup> The result is stronger protection for customers, a reduction in chargebacks for fraud, and less disruption at checkout.

## Reduce friction at checkout

AI agents read customer signals in real time to handle checkout tasks automatically, including routing payments and authenticating securely.<sup>3</sup> This can reduce cart abandonment, cut manual intervention, and ensure a smoother journey across every channel.

<sup>2</sup> PayPal, 'Harnessing machine learning fraud detection technologies', 2024. Available at: <https://www.paypal.com/us/brc/article/payment-fraud-detection-machine-learning> (Accessed: September 2025)

<sup>3</sup> PayPal, 'Transforming Omni-Commerce Platforms with the Power of PayPal AI', 2025. Available at: <https://developer.paypal.com/community/blog/agentic-ready-services/> (Accessed: September 2025)

# Turning prediction into action

While AI is transforming real-time payment experiences, predictive analytics pushes that advantage further, helping retailers anticipate patterns, prevent issues, and design smoother, more resilient payment journeys.

## Prepare for high demand before it happens

Predictive models forecast purchase patterns and prepare payment systems to handle spikes, so retailers can:

- Anticipate seasonal surges and adjust processing capacity in advance
- Reduce downtime and failed payments during high-traffic periods
- Help customers experience smooth, reliable checkouts at peak times

## Spot and save at-risk customers

Analytics highlight shoppers likely to drop off and trigger targeted interventions, enabling retailers to:

- Identify signals of churn early
- Offer timely, personalized payment options or incentives
- Strengthen retention and protect customer lifetime value



## Keep payments consistent across channels

Predictive mapping can help ensure customers enjoy the same payment experience wherever they shop, meaning retailers can:

- Track how shoppers move between online, mobile, and in-store journeys
- Deliver consistent options and experiences across all touchpoints
- Reduce friction that leads to cart abandonment



# How is this impacting the customer experience?

As AI and predictive analytics continue to reshape payments, customer expectations are shifting in tandem. Shoppers now expect transactions to be seamless and integrated naturally throughout their purchase journey.

## Keeping payments easy

Low friction checkouts have become the standard. From one-tap checkouts to auto-filled details, retailers are reducing the friction from the payment stage. This enables customers to transition smoothly from decision to purchase.

## Turning moments into purchases

AI enables contextual commerce, placing payment opportunities directly within the customer journey. This means a smooth path from browsing to buying, where the right option appears at exactly the right time.

## Building trust through transparency

Proactive fraud communication is also becoming a differentiator. Flagging potential issues before they escalate may help reduce support costs, protect transactions, and reinforce trust in their brand.





# Overcoming the barriers of AI in payments

Adopting AI in payments comes with its own set of challenges, but they don't have to hold you back. With the right approach, data silos, transparency concerns, and skilled labor shortages can all be addressed practically.

## 1 Break down data silos

AI needs the whole picture. To provide this level of granularity, retailers should:

- Consolidate payment data across channels into a single source of truth
- Choose interoperable systems that allow data to flow freely
- Use unified datasets to train AI for more accurate insights

## 2 Make AI explainable

Clarity around AI decisions help build confidence. You should be able to:

- Explain clearly how AI is used in payment decisions
- Balance automation with human oversight for sensitive cases
- Stay ahead of compliance requirements with transparent governance



## 3 Close the talent gap

AI in payments requires specialist knowledge, but retailers don't need to build that capability in-house to move forward. Progress can be accelerated by:

- Partnering with trusted providers who bring proven AI-in-payments expertise
- Upskill internal teams to apply AI with guidance from external experts
- Starting small with phased implementations that reduce complexity

# What should you prioritize?

**87% of retailers said AI has helped increase annual revenue.**<sup>4</sup>

**94% of retailers have cut operating costs using AI.**<sup>4</sup>

AI adoption in retail is accelerating, but those seeing the strongest results are those taking a deliberate, phased approach. Strategic adoption is about focusing on the right use cases and building the right foundations, all while choosing partners that can help you along your way.

## Start where the ROI is clear

You don't need to experiment blindly, ROI is already clear in areas like fraud detection and personalized checkout, which can help retailers capture revenue that might otherwise be lost.

## Build resilience for the long term

Beyond quick wins, AI can strengthen your overall payment ecosystem. That means using predictive analytics to anticipate demand spikes, automating back-office processes to increase efficiencies, and designing systems that scale as customer expectations evolve. Resilience should be the goal, not just efficiency.

## Partner for competitive advantage

Strategic partnerships remain one of the fastest ways to scale. Rather than building in isolation, you can leverage embedded AI payment tools like PayPal Agentic Commerce, already optimized for payments and continually updated. This helps enable you to accelerate time-to-value and stay ahead of fast-moving developments without overextending internal resources.

<sup>4</sup> Nvidia, 'State of AI in Retail and CPG: 2025 Trends', 2025. Available at: <https://blogs.nvidia.com/blog/ai-in-retail-cpg-survey-2025/> (Accessed: September 2025)



# How PayPal can help

AI and predictive analytics are helping US retailers turn every transaction into an opportunity to drive loyalty and grow revenue. Those that act now will set the pace, capturing efficiencies and delivering the streamlined experiences customers already expect.

**PayPal Open** brings embedded AI capabilities and predictive tools directly into its global payments network, helping you realize these benefits faster. From mitigating fraud to powering personalization and streamlining checkout, PayPal's Agentic Commerce toolkit makes it easier for you to adopt AI strategically and at scale.

Together, this delivers smart payments and strong performance across the entire retail journey.

**Are you ready to put AI into action? Get in touch to start building a smart retail payment experience today.**

**Get in touch**

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