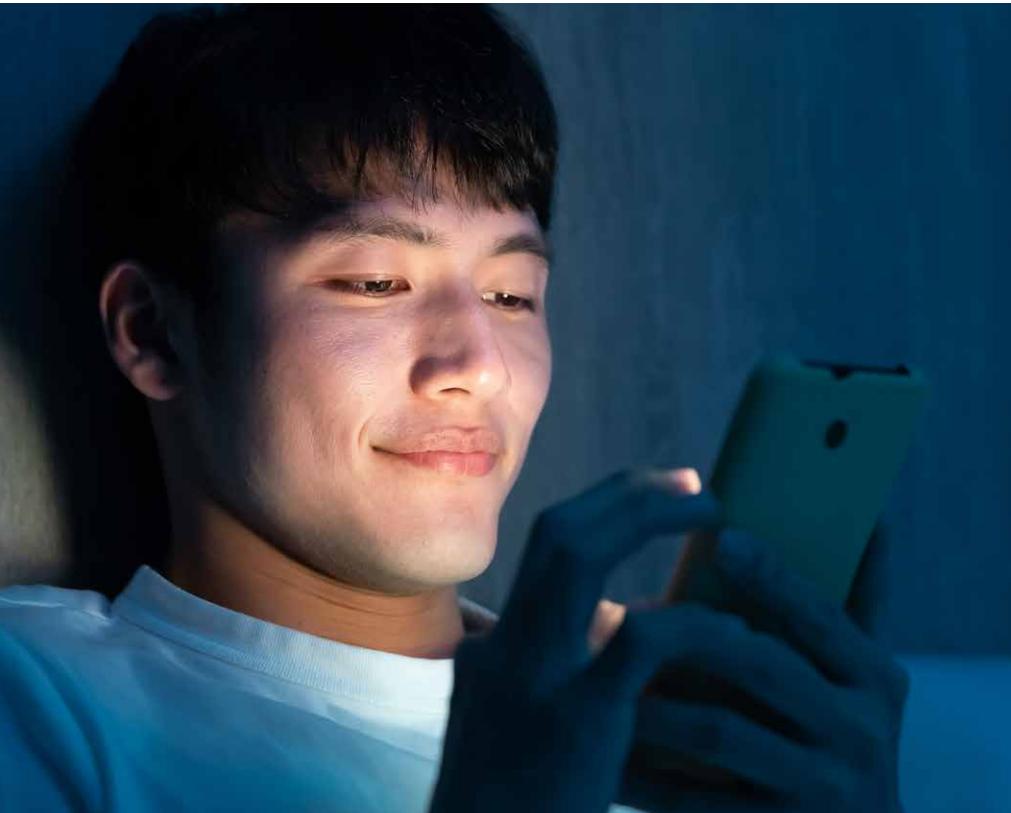
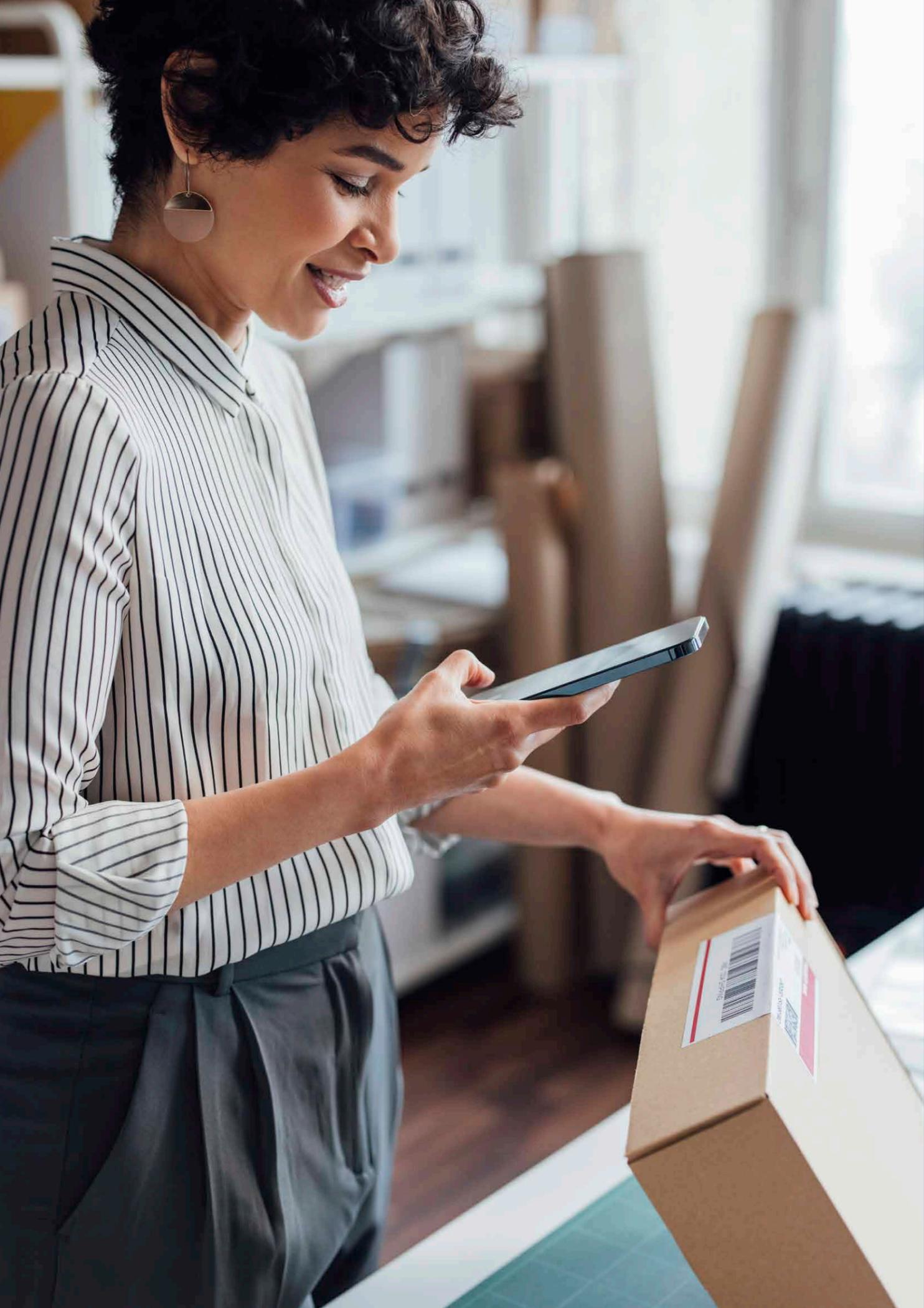




Fix the checkout, win the sale

Abandoned carts frustrate merchants and customers alike. But new solutions are reducing friction, restoring trust and recovering lost sales.





Executive Summary

Checkout is where too many sales fall apart.

Across Asia Pacific, merchants spend heavily to attract customers—only to lose them at the final moment. Shoppers arrive at checkout ready to buy, then abandon purchases when the experience feels slow, complex, or insecure. Manual card entry, one-time passwords, redirects, and false declines break momentum precisely when intent should convert into revenue.

This friction is more than a poor user experience: it is a material business problem. Abandoned carts and lost trust mean lower revenue, higher costs, and slower growth—especially in mobile-first Asia Pacific.

The opportunity: merchants no longer have to choose between security and conversion. New payment technologies are reducing fraud while streamlining checkout, aligning online payments with the simplicity customers experience in-store.

This paper examines the true cost of checkout friction in Asia Pacific and how solutions like Click to Pay and Visa Payment Passkey can transform checkout from a point of failure into a competitive advantage.

One Failed Checkout, Two Missed Opportunities

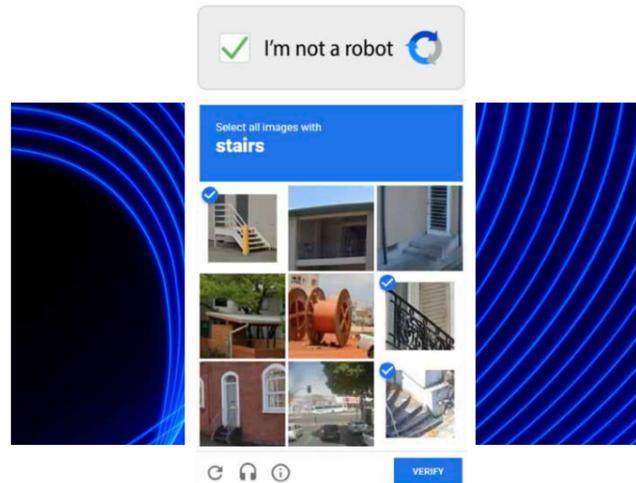
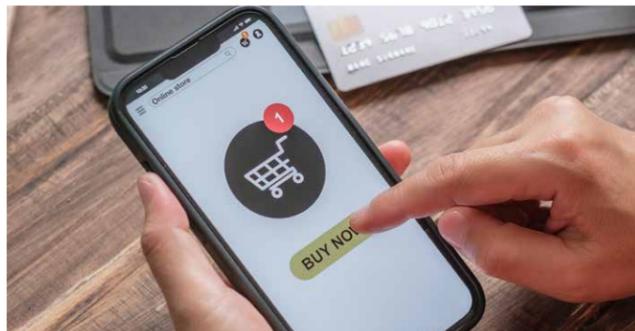
When purchases fall through, shoppers and merchants both lose

It's Tuesday morning and Sean is on his way to the office. Like many professionals across Asia Pacific, his commute doubles as personal time—a narrow window to take care of small personal tasks before the workday begins.



He opens a concert-ticketing app on his phone. He's ready to purchase. The seats are available and the price is right.

Then the checkout begins.



He's asked to manually enter a 16-digit card number. A typo sends him back to the start. A one-time password arrives late. Just as the transaction resumes, he's prompted to complete a CAPTCHA. The train stops. Sean puts his phone away. The purchase is abandoned.



On the other side of that moment, an online merchant sees another cart that doesn't convert.



\$260 billion

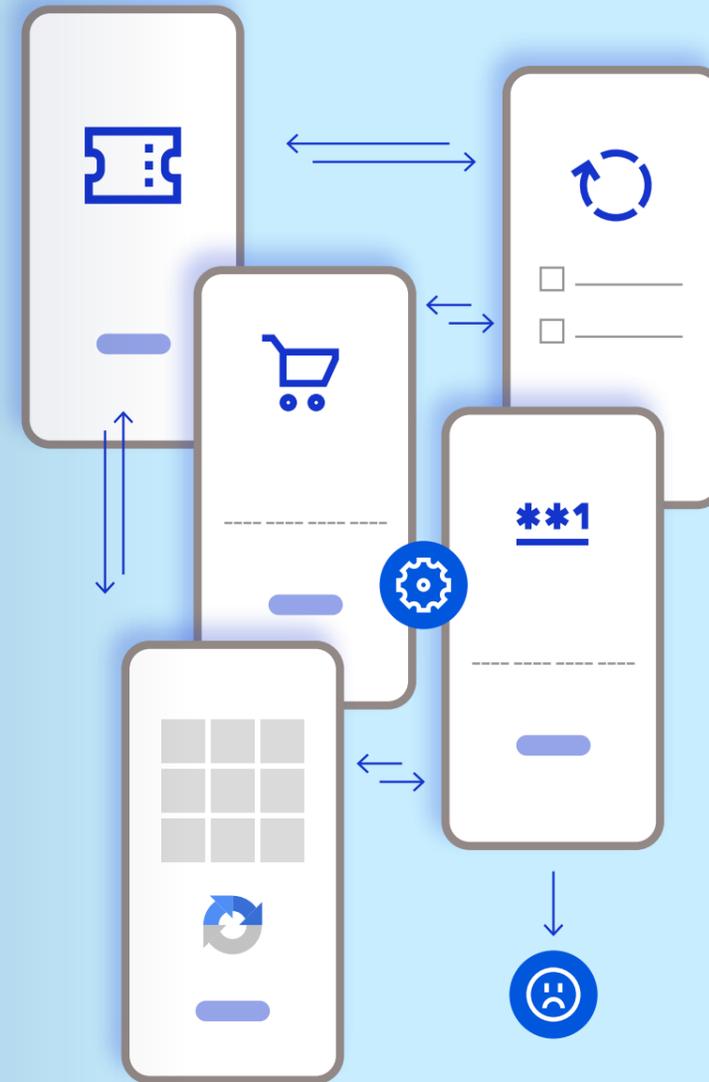
in lost revenue globally due to cart abandonment.



Today's consumers expect fast, secure digital commerce, and transacting online or in an app should be as simple and secure as it is in person; it should just work every time, all the time.



Samuel Mason
Head of Digital Payments Asia Pacific, Visa



This single interaction represents one of the most persistent and expensive problems in digital commerce. At scale, these moments can add up to nearly \$260 billion in lost revenue globally,¹ as customer intent evaporates at the final step.

"Every abandoned shopping cart or failed online transaction tells a story of two lost opportunities," says Samuel Mason, Head of Digital Payments Asia Pacific, Visa. "Today's consumers expect fast, secure digital commerce, and transacting online or in an app should be as simple and as secure as it is in person; it should just work every time, all the time."

Through the next generation of payments technology, such as Click to Pay and Visa Payment Passkey, Visa is enabling effortless payments that power the growth of eCommerce globally, improving security, reducing fraud, and preventing lost sales.

"Innovation means the end of manual card entry, multiple authentications, and one-time passcodes (OTPs)," explains Mason. "We are at the dawn of a new era of friction-free payments powered by technology that 'just works'. It makes digital checkouts easy, smart, and secure for customers while helping merchants boost their business growth."

How Payment Friction Drives Lost Sales

Checkout isn't just technical plumbing. It's the moment where revenue is either secured or slips away.

Marketing investment, brand trust, and customer intent have all led to this moment. Customers rarely abandon checkout because they stop wanting your product. They abandon it because friction disrupts the momentum of a purchase already in progress.

"In today's fast-paced life, checkout needs to be friction-free," says Mason of Visa. "People don't have time to navigate cumbersome procedures. They just want to make the purchase and carry on with what they were doing."

Across Asia Pacific, where a growing proportion of the population is mobile-first, online sales are increasing fast. In a recent survey, 66% of respondents said they make eCommerce transactions at least once a week, with the figure as high as 86% in Mainland China.²

Sean makes several online purchases every day. Yet for his digital-native generation, the reality of online shopping has failed to keep pace with expectations: the average mobile checkout time is five minutes. Meanwhile, almost nine in 10 Asia Pacific organizations (87%) admit that potential customers abandon their cart or sign-up process.³

The challenge for merchants is striking a balance between fraud protection and checkout speed. Security measures are necessary, but they too often result in dissatisfied customers and lost sales.

From the merchant's perspective, one lost sale is bad enough. But the problem can go far deeper: a sticky checkout process in the form of OTPs or having to introduce your card number manually might spell the first—and the last—time a customer visits an online retailer.



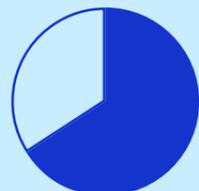
In today's fast-paced life, checkout needs to be friction-free.



Samuel Mason
Head of Digital Payments Asia Pacific, Visa



Percentage of respondents who said they make eCommerce transactions at least once a week



66%

Across Asia Pacific

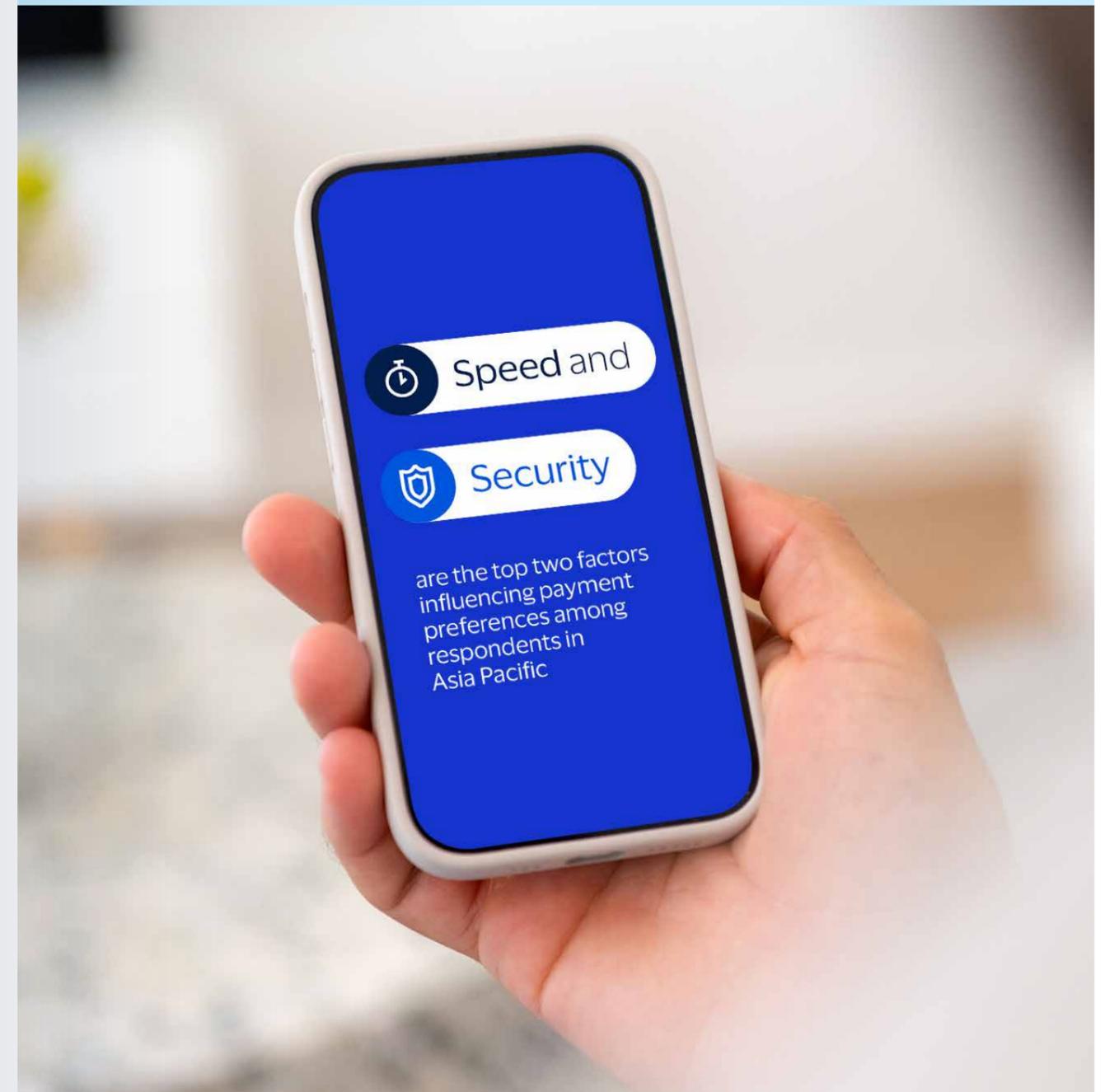


86%

in Mainland China

According to Visa's Green Shoots Radar report, speed and security are the top two factors influencing payment preferences among respondents in Asia Pacific.⁴ How successfully a merchant can cater to those twin priorities is the key to the commercial moment when intent is either confirmed or lost.

"Being a successful merchant in the digital world requires removing barriers to the checkout process," says Mason of Visa. "Friction means the potential for losing a sale because customers can just click away to another merchant that makes it easier for them."



Why Friction Persists

From complicated authentication measures to checkout experiences designed for desktop, the hurdles facing customers come at a cost.



Legacy Payment Infrastructure

Many online checkout experiences still rely on static primary account numbers (PANs) and manual card entry. These flows were designed for early eCommerce and desktop use but they introduce unnecessary steps and exposure in modern digital environments.



Outdated Authentication Methods

One-time passwords, redirects, and step-up authentication are widely used to manage fraud risk. While effective in some scenarios, these methods often interrupt checkout flow, introduce delays, and fail at critical moments, particularly on mobile.



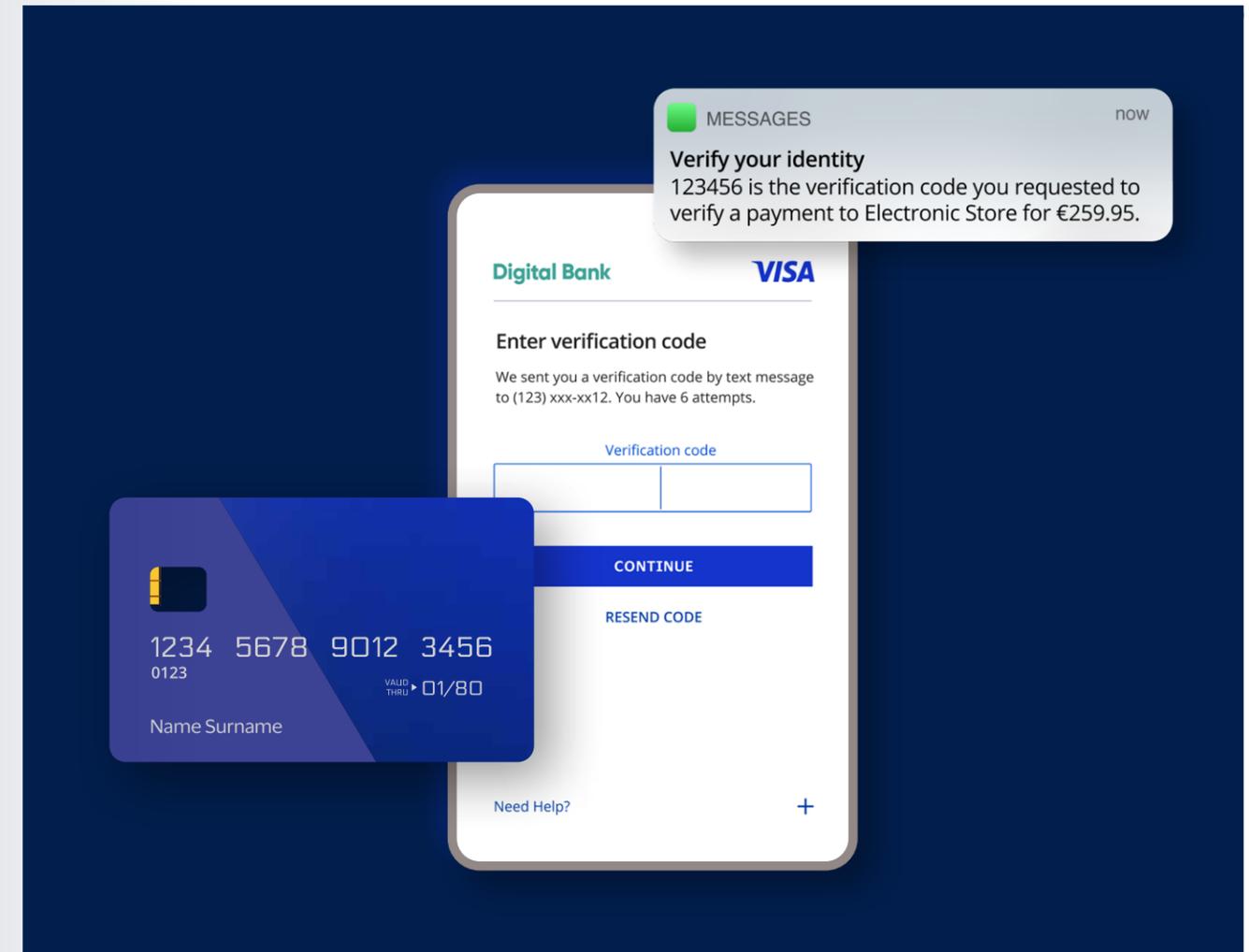
Mobile Checkout Constraints

Mobile devices dominate eCommerce yet many checkout experiences still require behaviors better suited to desktops. Typing long card numbers, switching between apps, or re-entering information on small screens increases friction and abandonment risk.



Fragmented Payment and Fraud Systems

Merchants frequently operate across multiple gateways, acquirers, fraud tools, and regional integrations. These fragmented systems exist because, unlike hardware, online solutions aren't limited by physical limitations. Lower barriers to participation mean more players can solve the same core problem in different and innovative ways. But they also create inconsistent checkout experiences and make it difficult to deliver a seamless, end-to-end flow.



Add all of this up, and the damage extends beyond a single abandoned cart. 43% of consumers say too many steps or complicated checkout experiences significantly reduce their desire to interact with a preferred brand or retailer in future.⁵

Each additional step increases the risk of error, hesitation, or abandonment. For merchants that operate at scale, even a small drop-off in sales through checkout friction translates into significant lost revenue.

Merchants face a painful paradox: the very security measures designed to protect transactions can undermine consumer confidence when they feel outdated or intrusive.

For merchants looking to grow digital revenue, the message is clear: checkout friction is no longer just a UX issue—it is a commercial one. Reducing it is about modernizing security, not compromising it. Those who succeed will not only recover lost sales, but build trust, loyalty, and a payment experience that feels worthy of the brand behind it.



43%

of consumers say too many steps or complicated checkout experiences significantly reduce their desire to interact with a preferred brand or retailer in future.

Asia Pacific: Why Smarter Checkout Matters More in Mobile-First Markets

Asia Pacific is one of the fastest-growing eCommerce regions in the world—and one of the most demanding. Mobile-first behavior, accelerating cross-border commerce and high expectations around trust mean that checkout friction is felt more acutely than in many other markets.

Mobile-First Commerce

Smartphones account for the majority of eCommerce transactions across Asia Pacific—they accounted for 64% of the region’s eCommerce market size last year—underscoring how deeply they have become part of everyday life.⁶

Checkout experiences that rely on manual entry, redirects, or multi-step authentication are particularly fragile in mobile-first environments, where time and attention are limited.

Smartphones accounted for

64%
of Asia Pacific’s
eCommerce
market size
last year



High Frequency of Cross-Border Transactions

Cross-border shopping is becoming mainstream across Asia Pacific. According to the October 2024 Green Shoots Radar, 39% of consumers shop from overseas merchants at least once a week, up from 32% just four months earlier.⁷

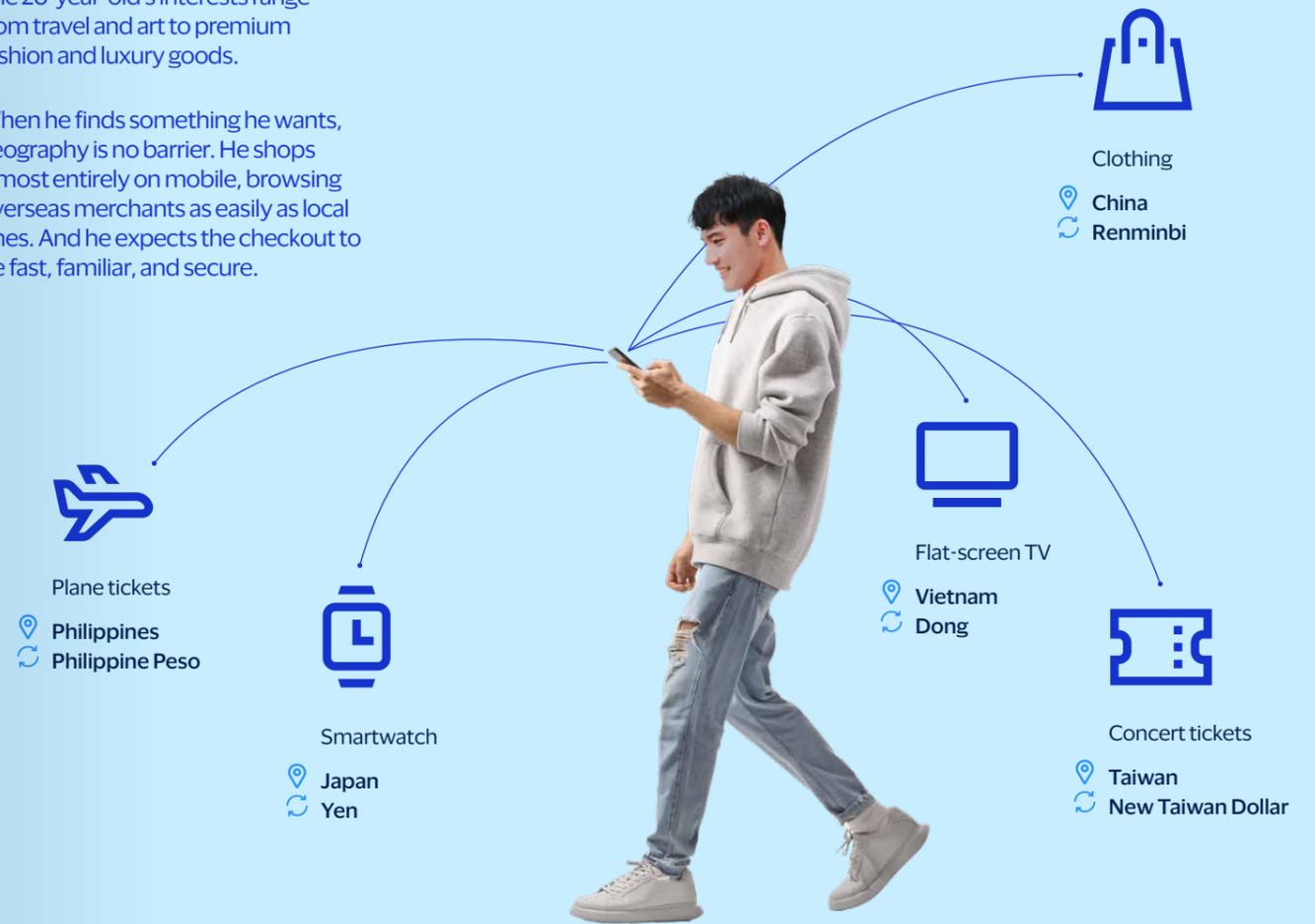
“Cross-border eCommerce is growing faster in Asia Pacific than anywhere else, driven by the region’s role as a global manufacturing hub and the rapid rise of eCommerce platforms,” says Krishna Thiruvengadam, Head of Core Platforms and Digital Solutions, Visa. “Consumers are looking beyond borders to meet their shopping needs, and they expect those transactions to work just as if they were buying from a local merchant.”

39% of consumers now shop from overseas merchants weekly



Sean is emblematic of this shift. The 26-year-old’s interests range from travel and art to premium fashion and luxury goods.

When he finds something he wants, geography is no barrier. He shops almost entirely on mobile, browsing overseas merchants as easily as local ones. And he expects the checkout to be fast, familiar, and secure.



Gen Z Drives Shopping Beyond Borders

Younger consumers across the region are shaping expectations for eCommerce. Not only are they comfortable transacting online—they are also increasingly willing to shop beyond borders: nearly half of Gen Z and younger Millennials report shopping globally at least once a month.⁸ For these consumers, international merchants are not a special case—they are just a tap away.

Yet they are also intolerant of slow, inconsistent, or outdated checkout experiences—especially when those experiences fall short of what their devices are capable of delivering.

Asia Pacific Embraces AI Agents

Throughout Asia Pacific, 74% of consumers already use AI-powered tools to discover, track, or learn about

products,⁹ reflecting a strong take-up of new technology and a willingness to enter the next phase of the digital economy when it comes to shopping.

“The way people shop is changing quickly, with AI now playing a growing role in how consumers discover and choose products,” says T.R. Ramachandran, Head of Products & Solutions, Asia Pacific at Visa.

Trust in Payment Security Is Key

Asia Pacific consumers expect strong security and increasingly associate modern, seamless checkout experiences with safety. Payment flows that rely on manual card entry, repeated authentication, or redirects can undermine trust rather than reinforce it.

Even with the growing willingness to use AI as a shopping tool, consumers in the region remain highly sensitive

to trust-related issues. Some 32% of consumers remain reluctant to share personal or payment information with AI systems.¹⁰ “As AI becomes part of the checkout experience, trust and control become even more important,” says T.R. Ramachandran. “Consumers want to understand how their data is being used and feel confident that every transaction is secure. Building that trust is what will determine whether AI-powered commerce can truly scale.”

These regional factors do not create new sources of friction, but they intensify existing ones, increasing the commercial impact of checkout inefficiencies.

How Security Fears and False Declines Shake Customer Confidence

Whether the process feels too slow or insecure, checkout friction and blocked transactions drive away customer intent.

The Customers Who Never Come Back

Customers abandon purchases when checkout feels slow, confusing, or insecure. Each abandoned transaction represents unrealized revenue and wasted customer acquisition spend. At scale, even small increases in abandonment translate into significant revenue loss.

Some 18% of consumers say they have abandoned a cart simply because the checkout took too long or felt too complicated.¹¹ In addition, nearly one in five shoppers lose confidence in sites they perceive as insecure, amplifying abandonment risk.¹² For the merchants on the other side of the lost transaction, this can quickly add up to millions in lost revenue.

“One negative experience could mean a lost customer in the moment, but also a customer who won’t return,” says Mason of Visa. “In today’s competitive retail environment, no merchant can afford that outcome.”

‘A Gamechanger’: How Tokenization Stops False Declines

False declines occur when valid transactions are rejected due to fraud controls. For merchants, this results in immediate lost revenue and damaged customer relationships. Many customers do not retry a declined transaction, amplifying the financial impact.

Research has shown that nearly half of merchants estimate that up to 5% of legitimate orders may be falsely

declined.¹³ According to one estimate, global losses from false declines hit \$430 billion in 2021, up from \$331 billion in 2018.¹⁴

A study of authentication and authorization shows that merchants can boost approval rates by moving to modern technologies such as tokenization. Network token-based transactions deliver up to a 5% increase in authorization rates compared with traditional primary-account-number (PAN) flows, converting sales that would otherwise be lost.¹⁵

“Tokenisation reduces risk and guesswork, helping ensure payments go through when they should - and are blocked when they shouldn’t”, says Thiruvengadam of Visa. “It’s a gamechanger.”

 **18%**

of consumers say they have abandoned a cart simply because the checkout took too long or felt too complicated.

Checkout frustrations

48%

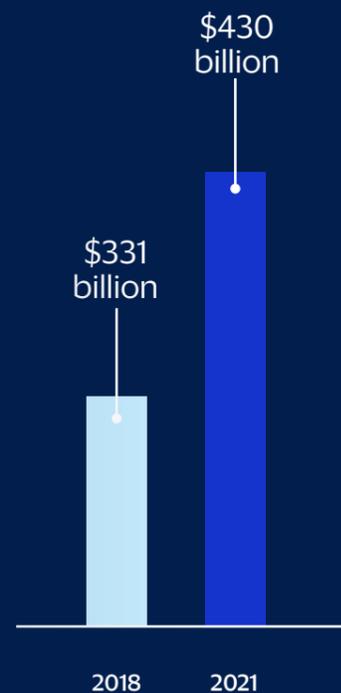
of consumers cite security concerns

72%

of surveyed shoppers are worried about the risk of fraud

59%

are concerned about storing card details on multiple sites



Global losses from false declines

Sticky Checkouts Erode Trust

Visa research shows that 48% of consumers cite security concerns as their biggest frustration at the moment of checkout, followed closely by having to manually enter card details.¹⁶ Meanwhile, 72% of surveyed shoppers are worried about the risk of fraud, and 59% are concerned about storing card details on multiple sites. The result: friction not only interrupts checkout experiences—it erodes trust in the merchant itself.

Trust is now the critical barrier between intent and action. 45% of Asia Pacific consumers say they would be more open to AI-powered or agentic commerce if they had stronger assurances around payment security,¹⁷ underscoring how closely conversion is tied to trusted checkout experiences.

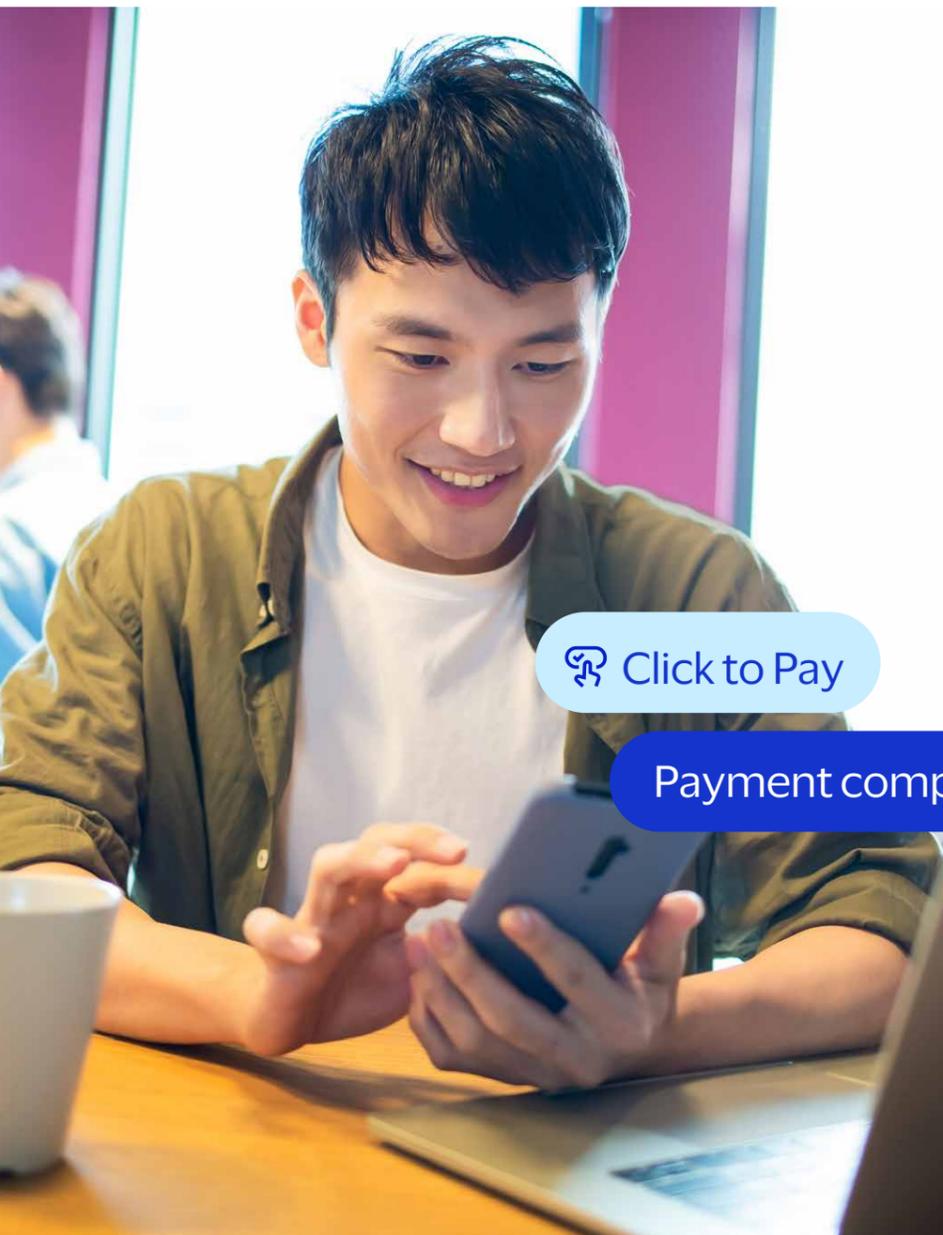
Outdated Systems Mean Operational Drag

Legacy and fragmented payment systems require ongoing maintenance, manual intervention, and exception handling. Fraud reviews, dispute management, and reconciliation consume operational resources that could otherwise be directed toward growth initiatives.

For merchants operating at scale, these moments compound quickly, turning checkout into a silent source of lost revenue and diminished customer loyalty.

From “87 Steps” to Effortless Payments

Not long ago, Sean’s attempt to buy concert tickets felt like a test of patience. Manual card entry. Address fields. CAPTCHAs. OTPs. Redirects. Small interruptions that stacked up until intent disappeared. It wasn’t literally 87 steps—but it felt that way.



Weeks later, Sean returns to the same site. This time, the experience is fundamentally different. He taps “Pay Now.” His payment details are already there. Authentication happens instantly using the biometrics on his device. There is no manual card entry, no OTP and no redirect away from the merchant site. The transaction completes in seconds. For the merchant, that difference is decisive: intent turns into a completed sale.

At the heart of this shift are two complementary solutions: Click to Pay and Visa Payment Passkey—both built on open-industry specifications and powered by Visa’s tokenization system.¹⁸

 Click to Pay

Payment complete

65%

of consumers say they would not shop with a given merchant again if their personal data were breached.¹⁹



Click to Pay with Visa

Click to Pay simplifies the checkout experience at the moment of purchase. By allowing customers to retrieve saved, tokenized payment details with minimal effort, it reduces the need to input long card numbers, expiry dates, three-digit CVVs, and even usernames and passwords.

In Asia Pacific, where mobile-first is the default but cart abandonment is high, a smooth checkout experience prevents potential revenue from slipping away. Digitally engaged customers spend more, more often. “Always on” credentials increase the likelihood that customers complete checkout with the merchant rather than clicking away.

Tokenization sits at the heart of this transformation. Replacing sensitive PAN data with secure tokens not only improves security but has tangible benefits: Visa tokenization contributed \$40 billion in incremental eCommerce

globally, and it saved \$650 million in fraud during 2023²⁰ through reduced exposure to sensitive data.

Not only that, but tokenized credentials mean the merchant never sees raw card numbers: personal data is replaced with unique tokens, significantly reducing exposure of sensitive information and reducing the risk of fraud. Transactions may qualify for fraud-liability protection for merchants. That reduces the cost of replacing physical goods, the cost of replacing the sale, and the operating expenditure associated with investigations.

Tokenized checkout flows coupled with Click to Pay can increase authorization rates by 4.3% and reduce fraud by 31% compared with traditional card-not-present transactions.²¹ For merchants, this means more sales and fewer disputes.

“Click to Pay lets merchants do what they do best,” says Thiruvengadam of Visa. “Focus on sales and customer satisfaction—all without sacrificing safety.”

Click to Pay also acts as a vital building block in preparing for agentic commerce, providing reassurances to consumers who want to incorporate AI in their purchasing habits but who remain questioning about security; in digitally mature markets such as Singapore and Japan, openness to AI-driven purchasing remains low—not because of lack of innovation, but because expectations around security, control, and reliability are higher.



Visa Payment Passkey

While Click to Pay streamlines the checkout experience, Visa Payment Passkey (VPP) verifies customer identity instantly. Built to FIDO specifications, a global standard for strong authentication,²² VPP uses the biometric capabilities—fingerprint and facial recognition—already present in smartphones and other devices to authenticate payments. Say goodbye to OTPs. Consumers register their device and payment credentials once, and then enjoy a consistent, fast, and painless payment experience at participating merchants.²³

“It makes the transaction more secure for both customer and merchant by identifying the consumer seamlessly and accurately,” says Thiruvengadam.

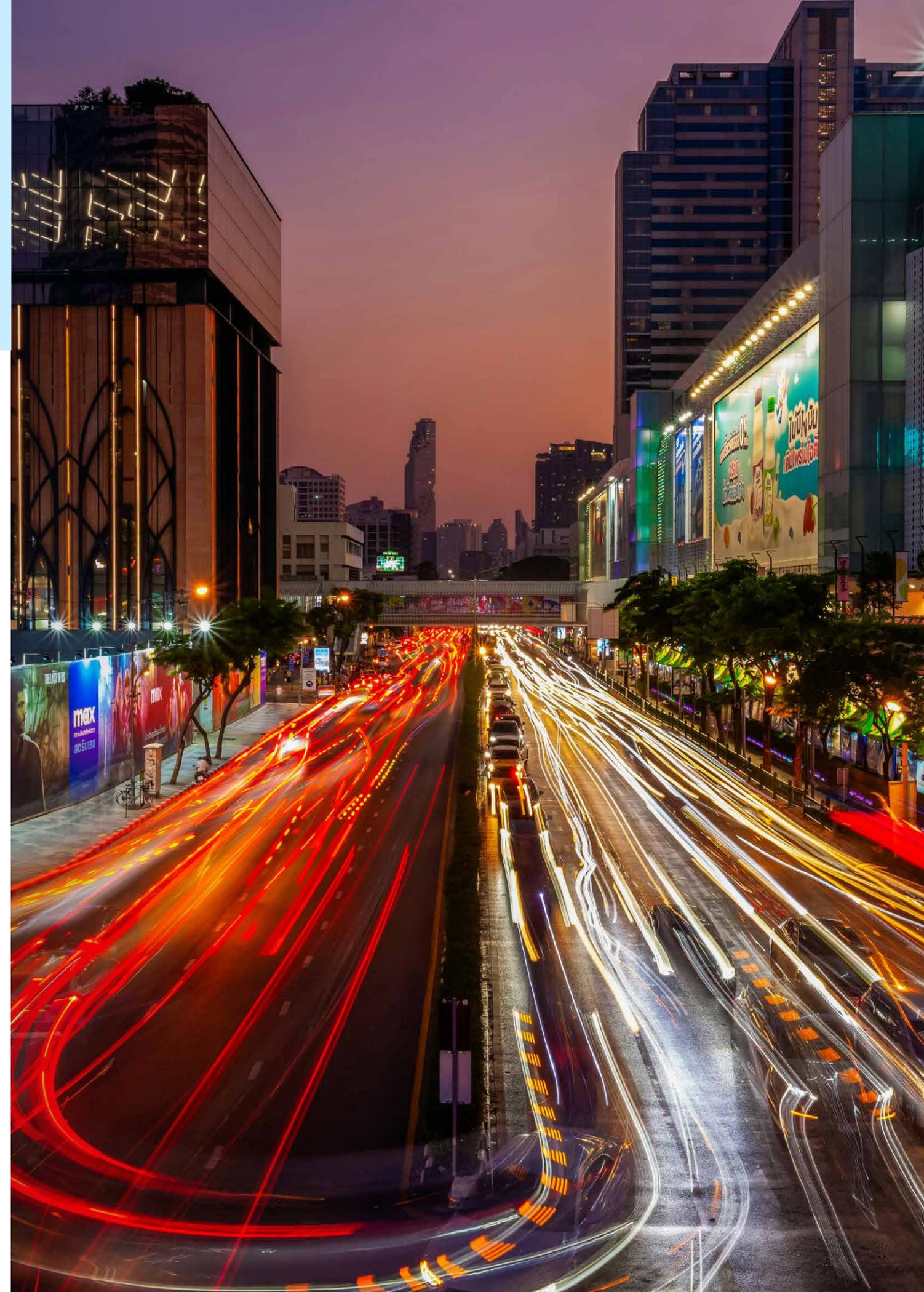
That not only cuts the time required to complete a transaction; it also reduces fraud. As an added reassurance for customers, biometric data remains on their device. Merchants never see data relating to fingerprints or facial recognition. Combined with Visa’s tokenization, it means both payment and identity are protected.

As digital commerce continues to grow, driven by cross-border demand and mobile convenience, adopting these payment innovations becomes a critical differentiator for merchants seeking to capitalize on eCommerce expansion.

Conclusion

The eCommerce landscape across Asia Pacific is changing at pace, driven by shifting consumer habits and the rapid evolution of technology. Against this stark reality, merchants that fail to provide the most secure and seamless checkout experience risk being left behind in a hinterland of outdated systems, rising exposure to potential fraud and, ultimately, a shrinking client list.

As eCommerce scales, winners will be defined at checkout—the moment intent either turns into revenue or slips away. Merchants that invest in payment innovation now can future-proof growth while delivering the speed and simplicity customers expect.





End notes

1. <https://baymard.com/lists/cart-abandonment-rate>
2. <https://sg.review.visa.com/about-visa/stories/2025/commerce-of-tomorrow-ecommerce-no-longer-a-niche-but-a-way-of-life-in-asia-pacific.html>
3. <https://retailasia.com/e-commerce/news/i-am-not-robot-84-apac-consumers-abandon-carts-due-complex-login-process#:~:text=55%25%20of%20consumers%20are%20frustrated,login%20process%20is%20too%20arduous>
4. <https://www.visa.com.sg/about-visa/stories/2025/commerce-of-tomorrow-why-ecommerce-growth-in-asia-pacific-depends-on-frictionless-secure-payments.html>
5. 2024 Trends in Customer Experience & Commerce, 451 Research, Nov 23
6. <https://www.mordorintelligence.com/industry-reports/asia-pacific-ecommerce-market>
7. <https://sg.review.visa.com/about-visa/stories/2025/commerce-of-tomorrow-ecommerce-no-longer-a-niche-but-a-way-of-life-in-asia-pacific.html>
8. <https://sg.review.visa.com/about-visa/stories/2025/commerce-of-tomorrow-ecommerce-no-longer-a-niche-but-a-way-of-life-in-asia-pacific.html>
9. <https://www.straitstimes.com/paid-press-releases/74-of-asia-pacific-consumers-already-use-ai-to-shop-but-trust-and-transparency-hold-the-key-to-checkout-visa-survey-20260210>
10. <https://www.straitstimes.com/paid-press-releases/74-of-asia-pacific-consumers-already-use-ai-to-shop-but-trust-and-transparency-hold-the-key-to-checkout-visa-survey-20260210>
11. <https://corporate.visa.com/en/sites/visa-perspectives/innovation/optimizing-payment-experience.html>
12. <https://baymard.com/lists/cart-abandonment-rate>
13. <https://www.silicon.co.uk/press-release/85-of-merchants-battle-to-balance-customer-experience-and-fraud-prevention>
14. <https://www.riskified.com/blog/reduce-false-declines/>
15. <https://www.visa.co.uk/content/dam/VCOM/regional/ve/unitedkingdom/PDF/vca/uk-vca-thought-leadership.pdf>
16. https://km.visamiddleeast.com/en_KM/about-visa/newsroom/press-releases/prl-oman-02062025.html
17. <https://www.straitstimes.com/paid-press-releases/74-of-asia-pacific-consumers-already-use-ai-to-shop-but-trust-and-transparency-hold-the-key-to-checkout-visa-survey-20260210>
18. <https://corporate.visa.com/en/solutions/tokenization.html>
19. <https://www.pymnts.com/news/security-and-risk/2021/consumers-will-drop-a-merchant-over-a-single-data-breach/>
20. <https://corporate.visa.com/en/sites/visa-perspectives/company-news/visa-generated-40-billion.html>
21. VisaNet, Oct–Dec 2023. Visa credit and debit global card-not-present (CNP) transactions for tokenized vs non-tokenized credentials.
22. <https://fidoalliance.org/>
23. <https://www.visa.com/en-us/products/visa-payment-passkey>

DISCLAIMER

"Case studies, statistics, research and recommendations are provided "AS IS" and intended for informational purposes only and should not be relied upon for operational, marketing, legal, technical, tax, financial or other advice. You should consult with your legal counsel to determine what laws and regulations may apply to your circumstances. The actual costs, savings and benefits of any recommendations or programs may vary based upon your specific business needs and program requirements. By their nature, recommendations are not guarantees of future performance or results and are subject to risks, uncertainties and assumptions that are difficult to predict or quantify. Visa is not responsible for your use of the information contained herein (including errors, omissions, inaccuracy or non-timeliness of any kind) or any assumptions or conclusions you might draw from its use. Visa makes no warranty, express or implied, and explicitly disclaims the warranties of merchantability and fitness for a particular purpose, any warranty of non-infringement of any third party's intellectual property rights. To the extent permitted by applicable law, Visa shall not be liable to a client or any third party for any damages under any theory of law, including, without limitation, any special, consequential, incidental or punitive damages, nor any damages for loss of business profits, business interruption, loss of business information, or other monetary loss, even if advised of the possibility of such damages. Copyright and content accurate as of October 2025."

Forward Looking Statements:

"This report contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements generally are identified by words such as "believes," "estimates," "expects," "intends," "may," "projects," "outlook," "could," "should," "will," "continue" and other similar expressions. Examples of forward-looking statements include, but are not limited to, statements we make about our revenue, operational performance, client and merchant incentives, operating margin, tax rate, earnings per share, free cash flow, operational performance, and the growth of those items.

By their nature, forward-looking statements: (i) speak only as of the date they are made; (ii) are not statements of historical fact or guarantees of future performance; and (iii) are subject to risks, uncertainties, assumptions or changes in circumstances that are difficult to predict or quantify. Therefore, actual results could differ materially and adversely from our forward-looking statements due to a variety of factors, such as those more fully described in our filings with the U.S. Securities and Exchange Commission, including our most recent Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commissions.

You should not place undue reliance on such statements. Except as required by law, we do not intend to update or revise any forward-looking statements as a result of new information, future developments or otherwise."

Third Parties:

"All brand names, logos, and/or trademarks are the property of their respective owners and do not necessarily imply product endorsement or affiliation with Visa."