

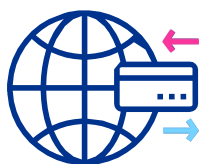


The next era of payments

How x402 and emerging technologies are redefining the internet's financial architecture



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Introduction

The global payments system is undergoing the most dramatic transformation in its history, with more change in the past decade than ever before. The majority of today's payments infrastructure was built for an offline, often card-centric world, yet it now sits in stark contrast to the realities of the modern web: always-on, frictionless, high-speed and instantly available. International payments are still subject to time zone differences, public holidays and weekday-only processing.



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an open, internet-native payments
standard designed to let systems
pay each other as easily as
sending an email**

While significant progress has been made through instant payments, open banking, stablecoins and digital wallets, today's rails still fall short of supporting the emerging era of machine-native, Artificial Intelligence (AI) driven and autonomous commerce.

This is where x402 represents a step-change: an open, internet-native payments standard designed to let systems pay each other as easily as sending an email. By removing friction, enabling programmable value exchange and supporting agent-initiated payments at scale, x402 points toward a future where value moves at the speed and fluidity the digital economy demands.

The internet's missing payment layer — now arriving

For decades, the internet has operated without a native way to move value, a gap that has long limited the promise of Web3 and the vision of an open, frictionless, machine-speed digital economy. Traditional payment rails such as card scheme networks and ACH (Automated Clearing House, such as SEPA - Single Euro Payments Area) were engineered for human-centric flows involving authentication steps, checkout screens and stored credentials. They were never designed for AI models purchasing data on the fly, Internet of Things (IoT) devices paying for bandwidth or electricity in real time, or autonomous agents settling micro-transactions at web scale.

In their absence, the industry has relied on workarounds such as subscriptions, paywalls and stored credentials; all of which introduce operational friction, slow settlement cycles, cost-prohibitive micro-transactions and hard bottlenecks for autonomous systems.

x402 represents a new class of internet-native payment capability which, crucially, will coexist alongside card networks, instant payment systems, digital wallets and stablecoins, serving specific use cases where machine-to-machine settlement, micro-transactions, programmability and frictionless onboarding are required. In this sense, it complements, rather than competes with, established payments infrastructure.

As these next-generation patterns rapidly emerge, firms should take a holistic look at their payments strategy. Those who reassess early, understand where x402-style capabilities fit, and place deliberate bets will be best positioned to capitalise on the next wave of digital-native and agent-driven commerce.

x402 in action: overall statistics (February 2026)

161.32M

Transactions

\$43.57M

Volume

417.01K

Buyers

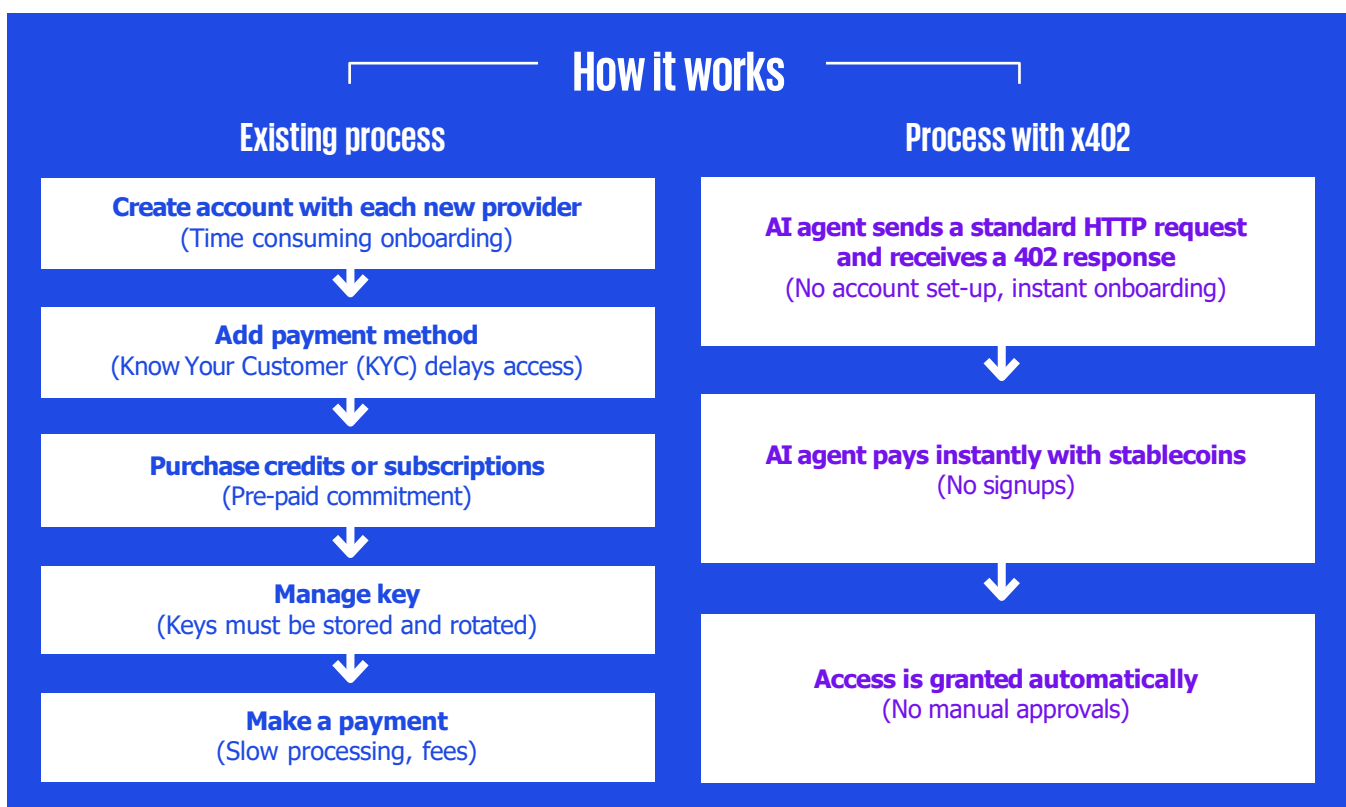
83K

Sellers

x402 in practice:

A simpler, smarter way to transact

x402 makes it possible to use the HyperTextTransfer Protocol (HTTP) 402 'Payment Required' status code to request payments directly through standard web requests. Instead of accounts, keys or lengthy onboarding journeys, x402 enables a simple, universal interaction between any client (human or machine) and a web service. It creates a seamless way to request and receive payment as part of the everyday HTTP protocol.



x402 introduces capabilities that were technically impossible to deliver until now:

- ✓ Micropayments at scale: fractions of a cent for data, compute, or content.
- ✓ Machine-to-machine commerce: AI agents pay each other autonomously without human oversight.
- ✓ Zero-account onboarding: no KYC, no login, no credit card; the wallet is the identity.
- ✓ Portable identity & reusable sessions: wallet-linked credentials streamline access and reduce fraud exposure.

Why these capabilities matter:



No built-in fees



Real-time settlement



Frictionless access

What this means for payments providers and regulators:



Monetisation moves from subscription to consumption

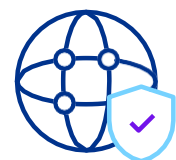
x402 accelerates the shift from static subscription models to dynamic, consumption-based revenue. By enabling per-request monetisation, firms can align pricing with actual usage and unlock margin discipline. The result is a more adaptive commercial model that better supports innovation, scalability and differentiated digital propositions. This shifts revenue from periodic billing to real-time transactional value.



Enabling autonomous payments across digital and AI ecosystems

As autonomous systems become economic participants, x402 provides the infrastructure for AI agents to transact independently in a controlled, auditable and rule-driven way.

AI systems can source data, trigger model runs, access premium endpoints or pay for compute without human involvement, creating a new class of autonomous customers and supply chains. This marks the next frontier of digital enablement, where payment leaders must design resilience, governance and trust frameworks for both human and non-human participants.



A new regulatory horizon for autonomous and real-time payments

The rise of autonomous payments introduces complex regulatory considerations that mirror emerging themes seen across governance, risk culture and consumer protection. Policymakers will need to define accountability for AI-initiated transactions, assess new forms of settlement risk, and update Anti-Money Laundering / Counter-Financing of Terrorism (AML/CFT) frameworks to reflect multi-chain, real-time activity. Similar to the Payment Services Directive (PSD2), the Digital Operational Resilience Act (DORA) and the Digital Omnibus, coordinated and forward-looking regulatory approaches will be required.



Embedded finance 2.0

x402 transforms every endpoint into a pay-enabled service, advancing Embedded Finance beyond basic “payment acceptance” into programmable commercial infrastructure. This unlocks real-time settlement, dynamic pricing, IoT-driven micro-transactions and machine-to-machine procurement flows. Financial institutions can leverage this evolution to build more resilient, interoperable and data-rich architectures that support digital transformation agendas and regulatory expectations around transparency and control.

Other emerging technologies shaping the next era of payments

x402 is part of a wider shift in payment innovation, supported by other emerging technologies such as:



Programmable payments:

Enables automated, rules-driven settlement, such as conditional payouts and usage-based pricing, while embedding financial controls that reduce manual intervention and operational friction.



Agentic commerce:

Autonomous systems from smart appliances to AI-driven procurement tools will increasingly transact without human intervention.



Central Bank Digital Currencies:

The expansion of pilot programmes exploring retail and wholesale Central Bank Digital Currencies use cases is creating the potential for programmable settlement, improved liquidity management and reduced systemic risk, while reinforcing monetary and payments sovereignty.



AI-driven fraud prevention:

AI-driven fraud prevention and AML/KYC automation use agentic AI to detect anomalies in real time while accelerating identity verification, reducing losses and strengthening overall compliance integrity.



ERC-8004 on-chain identity for autonomous systems:

A blockchain-based identity and reputation framework that allows AI agents to authenticate themselves and interact securely across digital ecosystems.



Stablecoins:

Fiat-referenced digital tokens that deliver efficient, low-cost and programmable settlement capabilities, supporting enhanced liquidity, cross-border transaction efficiency and the growth of on-chain financial services.



Tokenised deposits:

Bank-issued digital deposits recorded on distributed ledgers, providing real-time, programmable settlement and enabling deeper integration between traditional banking infrastructure and emerging digital asset ecosystems.



What should payment providers do now?

With payments moving rapidly toward automated, AI-initiated and multi-rail models, providers must take a holistic view of their technology and payment strategy foundations. A future-ready approach is now essential to compete in an agentic-commerce world.



01. Prepare for machine-native monetisation:

Build easy-to-use, developer focused toolkits that support micro-payments, real-time settlement, and seamless onboarding.



02. Rethink risk, governance and accountability:

Clear roles, strong leadership, and robust accountability frameworks are essential, especially when non-human systems begin initiating payments.



03. Build AI data payments ecosystem partnerships:

Future payment activity will be initiated by models, agents and algorithms rather than traditional customer checkout journeys.



04. Enable seamless multi-asset value flows:

With digital euros, stablecoins and crypto assets coexisting across separate wallets and networks, providers must build infrastructure that supports frictionless transfer and conversion across all rails and asset classes.

Conclusion

x402 represents the beginning of a new payments infrastructure for the next phase of the internet, complementing current payment rails and technologies by addressing specialised use cases in automated, interoperable, machine-driven value exchange. As real-time analytics, tokenised value and autonomous agents move into the mainstream, firms will need to support instant, machine-initiated payments at scale with architectures built for resilience, trust and interoperability.

With x402 already live and early adopters in payments, digital assets and fintech testing agent-led value exchange and programmable settlement, firms can begin exploring its potential through targeted pilots, interoperability trials and sandbox environments. As these next-generation patterns accelerate, firms should reassess their payments strategy. Those that understand where x402-style capabilities fit and make deliberate strategic moves now will be best placed to capture the advantages of digital-native, agent-driven commerce.



How KPMG can help

- ✓ We can provide an all-encompassing suite of payments, technology and regulatory competencies, bringing a proven track record of helping lead international firms define, refine and deliver future-ready payments strategies.
- ✓ We can help you navigate the evolving regulatory and risk landscape, aligning your roadmap with PSD2 and PSD3 / PSR1, DORA and AML/CFT expectations, the Markets in Crypto-Assets (MiCA) Regulation and future AI-payments regulatory models, ensuring compliance, control and auditability across all payment channels.
- ✓ We can help you build governance, risk and trust frameworks for AI-driven and autonomous payments, developing end-to-end controls across accountability, transaction monitoring, model governance and real-time risk analytics to support next-generation payment flows.

Get in touch

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Produced by: KPMG's Creative Services. Publication Date: February 2026. (12133)