

PLUGANDPLAY

# Payment Ecosystem Report 2024



# Key Takeaways

1

## Dominance of Alternative Payment Solutions

Buy now, pay later (BNPL), which is still the fastest-growing method.

2

## Competitive Payment Solutions

The traditional dominance of card payments is being challenged by new technologies such as account-to-account (A2A) payments, real-time payment systems, and innovative solutions like biometric payments and BNPL services. These advancements are transforming the payment landscape, making transactions more secure, efficient, and user-friendly.

3

## Cryptocurrency Evolution

Cryptocurrency as a payment method has seen substantial development since the release of Bitcoin in 2009. Major milestones include the introduction of smart contracts with Ethereum in 2015, the launch of the Lightning Network in 2018, and El Salvador adopting Bitcoin as legal tender in 2021.

4

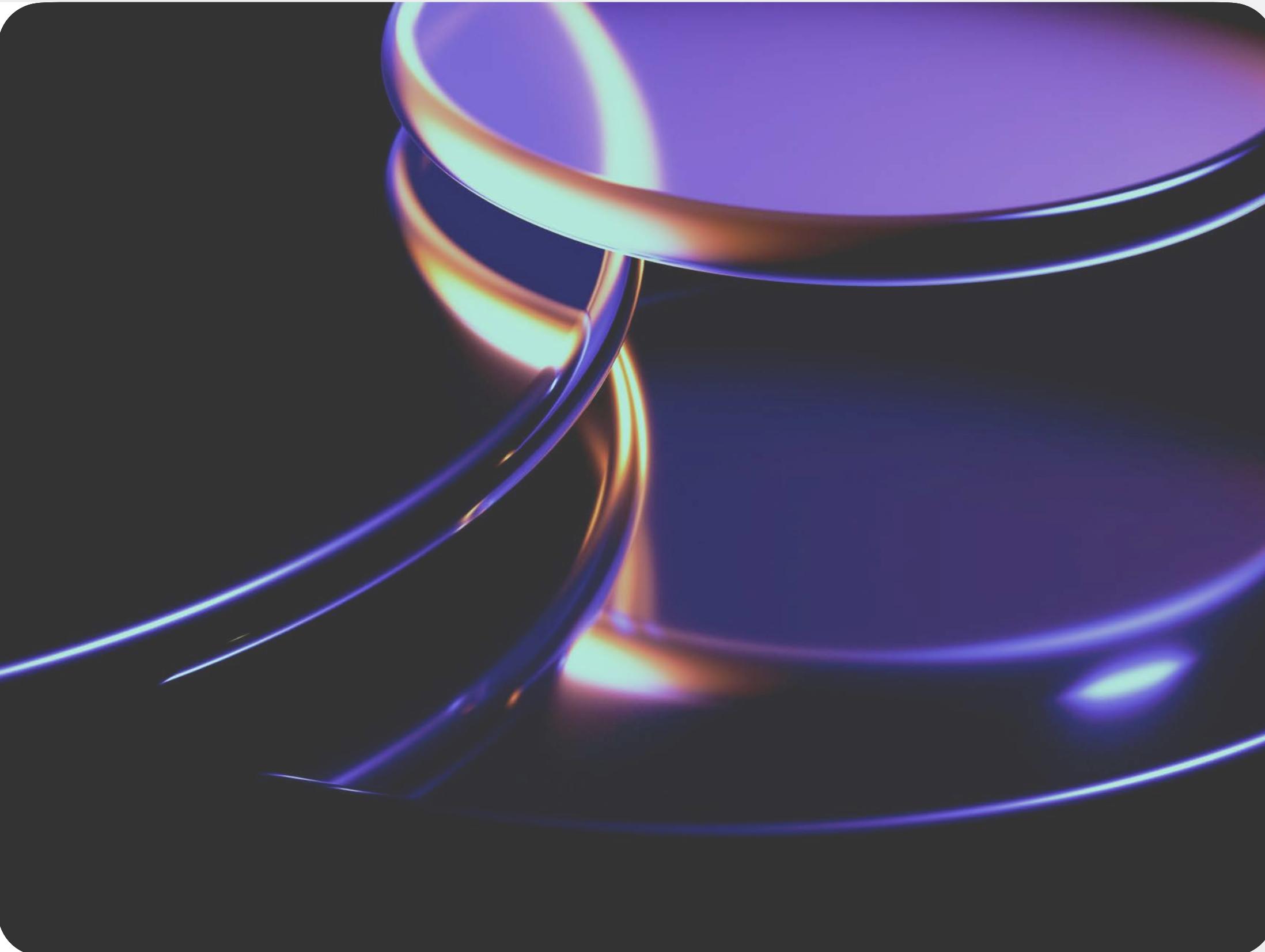
## E-Commerce Growth

This means continuing to make the payment experience even more convenient. The payment industry is influenced by several key factors, including customer demand for convenient, fast, and secure payments, intensifying competition from tech and fintech companies, rapid technological advancements, and evolving regulations promoting financial inclusion and consumer protection.

## Introduction to Plug and Play

Plug and Play Tech Center is a global innovation platform and accelerator headquartered in Sunnyvale, California. We aim to connect startups, corporations, venture capital firms, universities, and government agencies through various programs and initiatives, including:

- **Corporate innovation** — We collaborate with large corporations to help them innovate by connecting them with relevant startups through equity-free acceleration programs, events, and one-on-one meetings. The goal is for both to collaborate on pilot projects that will bring business opportunities to everyone involved.
- **Venture capital** — We are one of the most active venture capital firms, investing in early-stage startups from pre-seed to Series A.



# Introduction to Plug and Play



## CORPORATE INNOVATION

We supercharge the innovation of **over 500** industry-leading corporations by keeping them at the forefront of industry trends and we do that through **Equity-Free Pilot-Focuses Acceleration Programs, Events, Dealfow Sessions**, and more.



## VENTURE CAPITAL

We invest in **over 250** companies (from Pre-Seed to Series A) a year alongside the world's best VCs across all industries.



These activities put us uniquely positioned to collaborate with Global innovation leaders.

# 1. Introduction

## Intro to the Report

We have decided to craft this report because, over the past few months, we have received many requests from corporate partners around the world about payment innovations. We have also seen many entrepreneurs enter the space to innovate and help improve the industry.

## Table of Contents

This report is divided into three sections:

- 1. Current State of Payment**
- 2. Payment Value Chain**
- 3. Tech Trends**

## 2. Our Methodology

1

### **Identification of Research Topics Based on Internal Capabilities**

The first phase involved assessing various innovation topics previously explored with corporate partners. Additionally, we aligned these topics with the entrepreneurs we met and the solutions we assessed.

2

### **Exploration Based on External Capabilities**

We conducted comprehensive market research in the second phase to complement our internal knowledge. This included reviewing reports from reputable sources and engaging in discussions with corporate partners to understand the innovation topics they are focusing on for 2024.

3

### **Interviews With Corporates, Startups, and VCs**

In the final phase, we interviewed leading corporations in the payment space, entrepreneurs, and fellow venture capitalists looking at the payment ecosystem to gather their insights on upcoming trends. Their responses are included in the report as direct quotes to provide an external perspective.

4

### **Outcome: Report “Payment Ecosystem Report 2024”**

All of the previously mentioned steps culminated in a comprehensive overview of the current payment ecosystem and tech trends, which will be detailed in the following report. The payment ecosystem is profoundly transformed, driven by rapid technological advancements and shifting consumer expectations. In this report, we will examine how current actors are facing these changes and the emerging trends.

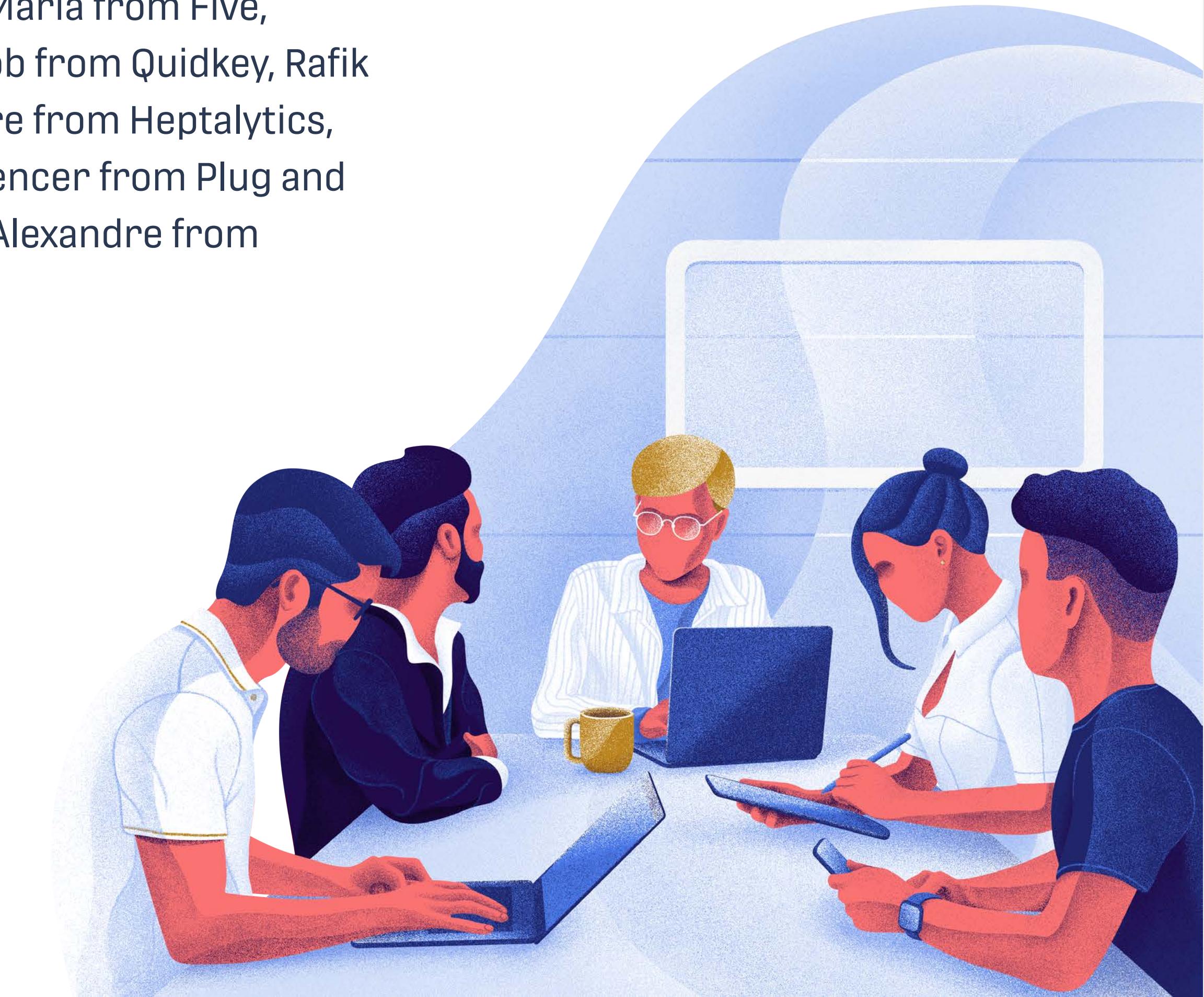
## 3. Acknowledgments

We would like to thank Carolin from Plug and Play, Maria from Five, Damien from 115k, Vassilina from Payment Vibes, Rob from Quidkey, Rafik from Start Ventures, Nicky from TunicPay, Alexandre from Heptalytics, Daria from Project A, Max from Brite Payments, Spencer from Plug and Play, Clarisse from New Alpha Asset Management, Alexandre from Bitstack, and Carla from Lead Blocker Partners.

We genuinely appreciate your contribution!

We hope that anyone reading this will enjoy it.  
Please do not hesitate to engage with us.

Greetings from Paris,  
Salim & Zoë



## 4. Current State of Payment

In its most common definition, payment refers to transferring money from a payer (either a business or an individual) to a payee in exchange for goods or services. This straightforward transaction characterized the early stages of payment. However, the industry has since evolved, incorporating increasing intermediaries between the initial and final parties involved.

The payment market is valued at \$2.85 trillion in 2024 and will continue to experience growth as it is projected to reach \$4.78 trillion by 2029, reflecting a compound annual growth rate of 10.88%.<sup>1</sup> Additionally, global payment revenues increased by 11% in 2022, reaching \$2.2 trillion, and are expected to surpass \$3.2 trillion by 2026.<sup>2</sup>

With all of this in mind, the payment industry remains dynamic and is influenced by several key factors:

- 1 Customers' demand for convenient, fast, secure payments and personalized experiences drives ongoing changes.**
- 2 Competition intensifies with tech and fintech companies offering innovative and competitively priced solutions.**
- 3 Rapid technological advancements are enabling disruptive payment solutions, continuously transforming the industry.**
- 4 Evolving regulations aimed at promoting financial inclusion, innovation, consumer protection, and privacy are shaping the industry.<sup>3</sup>**

<sup>1</sup> Mordor Intelligence, 2024: <https://www.mordorintelligence.com/industry-reports/global-payments-market>

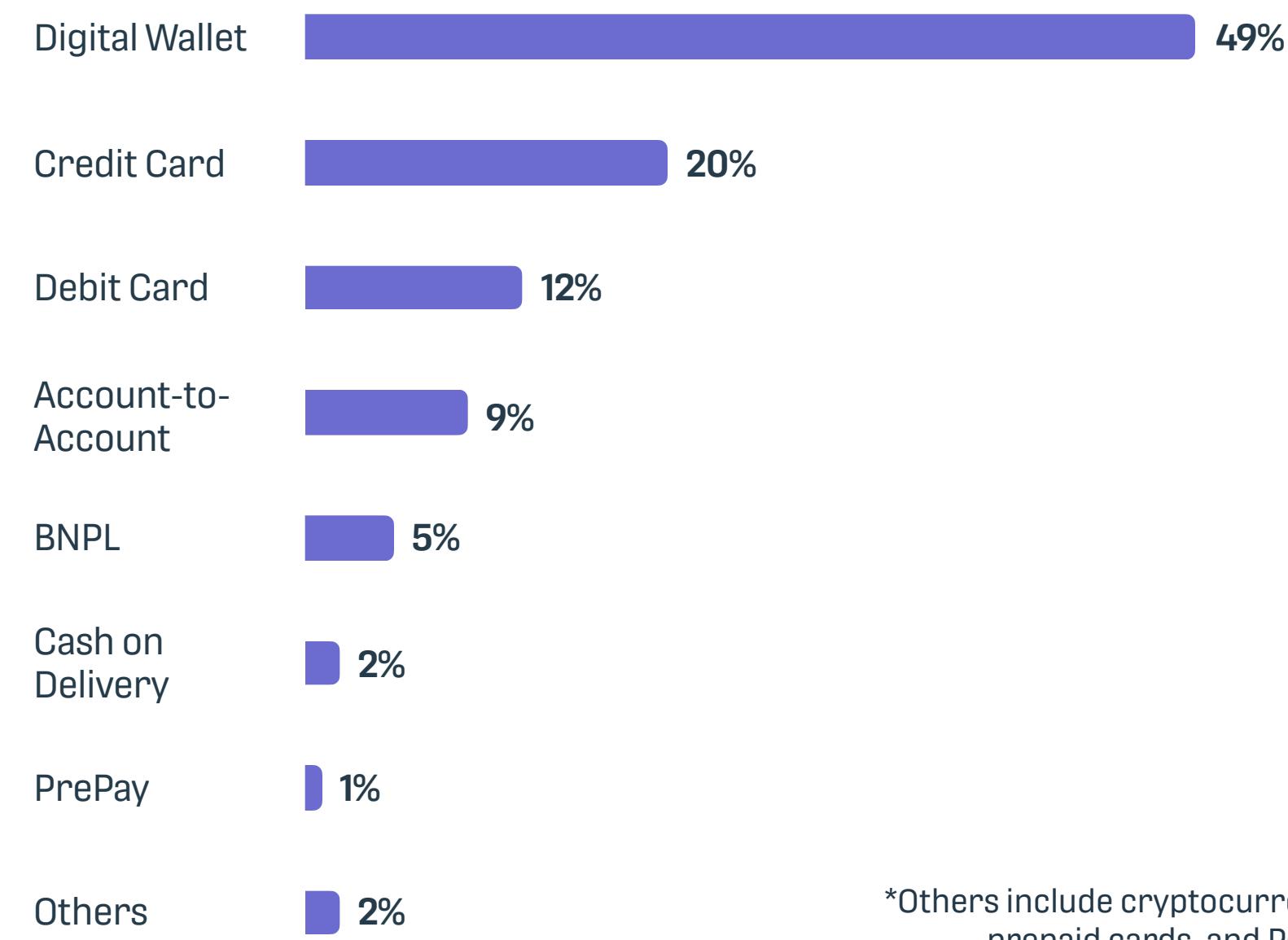
<sup>2</sup> McKinsey, 2023: <https://www.mckinsey.com/industries/financial-services/our-insights/the-2023-mckinsey-global-payments-report>

<sup>3</sup> MasterCard, 2024: <https://www.mastercardservices.com/en/advisors/payments/insights/state-global-payments-six-trends-shaping-industry>

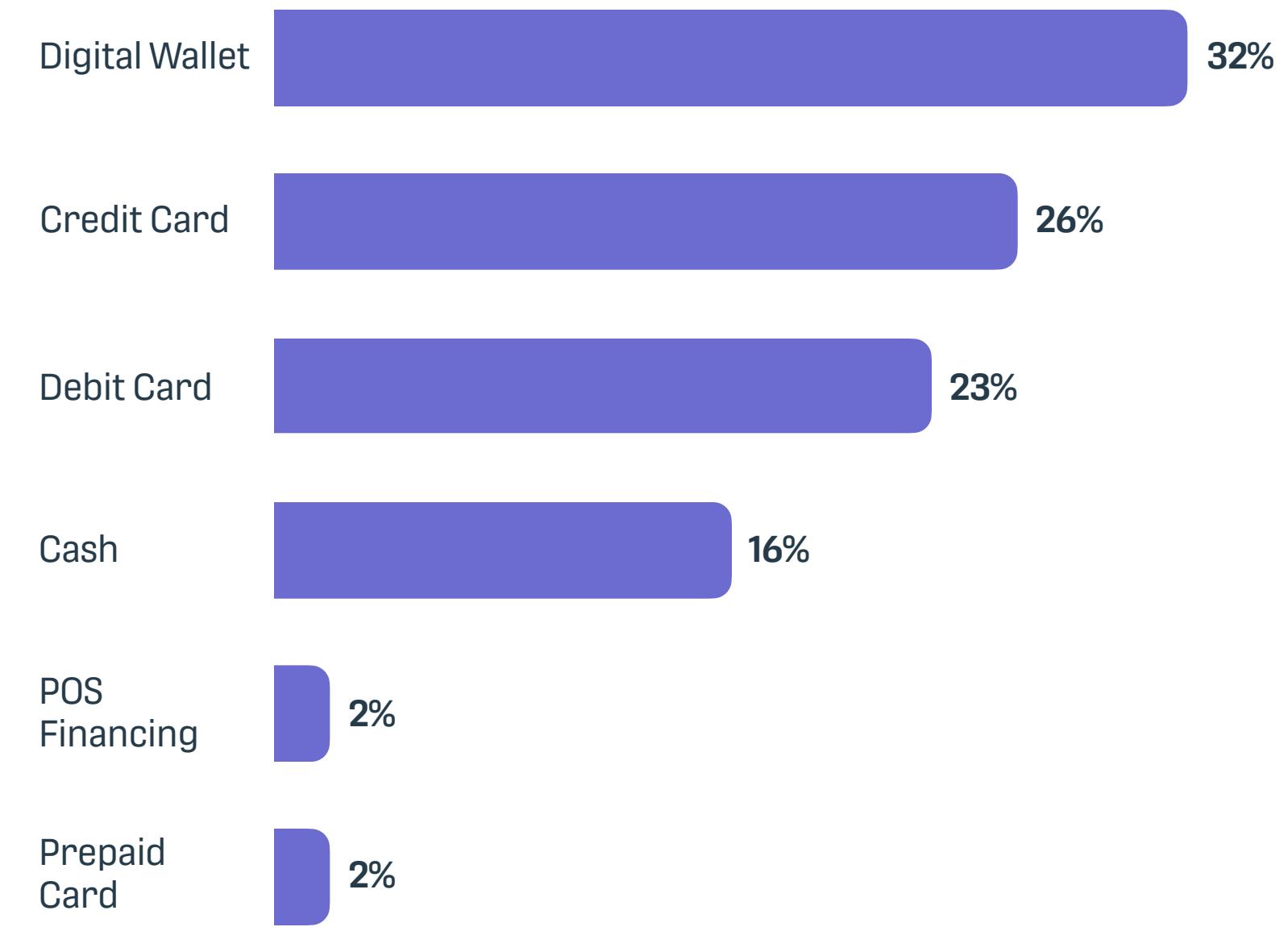
## 4. Current State of Payment

### Top Global E-Commerce & POS Payment Methods

#### Transaction Volume for Global E-Commerce Payment Methods in 2022



#### Transaction Volume for POS Payment Methods in 2022



## 4. Current State of Payment

Nowadays, there are more than 200 payment methods available for users, with the most popular being digital wallets and credit & debit cards.<sup>4</sup> These methods are impacting the industry in more ways than anyone can imagine:

- 1. Competition has intensified, and companies are compelled to innovate continually to offer faster, more secure, and more user-friendly payment solutions.<sup>5</sup>**
- 2. Consumers now have more choices and flexibility. They can select their preferred payment mode based on convenience, security, and rewards. This mainly benefits e-commerce, where customers expect quick and seamless checkout experiences. The risk of cyberattacks and fraud has increased. Businesses and financial institutions invest heavily in advanced security measures such as encryption, tokenization, and multi-factor authentication to protect against fraud.**
- 3. The risk of cyberattacks and fraud has increased. Businesses and financial institutions invest heavily in advanced security measures such as encryption, tokenization, and multi-factor authentication to protect against fraud.<sup>6</sup>**

Between 2010 and 2018, payments had to adapt to consumers' need for speed, flexibility, and an omnichannel experience. Social media platforms like Twitter (now X) and Instagram offered "buy now" features to view product prices and purchase directly from photos. Buy-now-pay-later options gained popularity for consumers who wanted to pay for things in various installments. With in-app purchases also increasing, the option to pay with mobile wallets was a must, opening the adoption of biometrics for authorizing online payments (mainly fingers and faces).

The COVID-19 pandemic has fast-tracked online consumption, digital payment adoption, and thus innovation. Millennials and Gen-Z generations increasingly spend time on social media and new mediums such as mobile or virtual desktop games. Speed and convenience for payment should not be considered a value-add by merchants but a necessity. This payment experience can be defined as just a few seconds in the journey, and any solution that can save some frustration for the consumer will leave a good impression.

<sup>4</sup> Brite Payments, 2024: <https://britepayments.com/resources/article/understanding-payment-methods/>

<sup>5</sup> TakePayments, 2023: <https://www.takepayments.com/blog/product-information/different-payment-methods/>

<sup>6</sup> Checkout, 2023: <https://www.checkout.com/blog/guide-payment-methods>

## 4. Current State of Payment

Since 2021, e-commerce brands have gone a step further to answer for speed in payments, trying to be much more data-driven by reinforcing their fraud detection capabilities and understanding consumer preference through transaction data. They have also adopted carbon-tracking and engagement solutions to educate clients and enhance CO<sub>2</sub> emission transparency and reporting. They have been leveraging one-click checkout solutions (also called fast checkout) at different moments of the website experience by using pre-saved customer information to confirm a purchase quickly.

Biometric authorization has increased in physical shops as pay-by-bank, open banking, and palm vein authentication technologies have matured. After giving an overview of the key payment players, this report will revisit or introduce some of these latest trends.

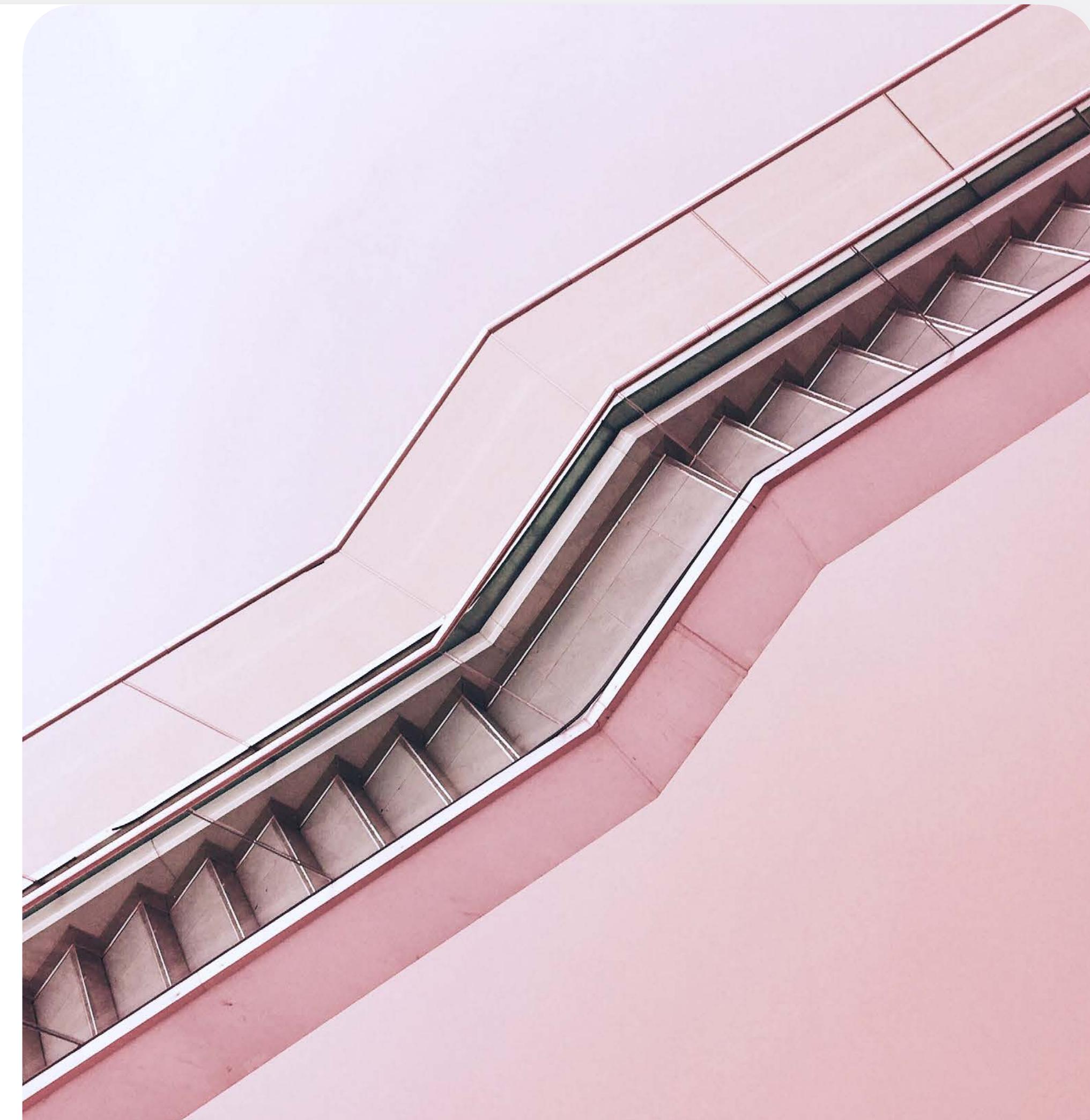
The era of cryptocurrency as a payment method began with the release of the Bitcoin whitepaper by the pseudonymous Satoshi Nakamoto in 2009. The first real-world transaction occurred in 2010 when 10,000 BTC was exchanged for two pizzas. Cryptocurrency continued to gain traction as organizations like WikiLeaks began accepting it for donations in 2011.



## 4. Current State of Payment

The Bitcoin Foundation was established in 2012 to promote its use, and the first Bitcoin ATM appeared in Vancouver in 2013. Significant companies started embracing cryptocurrencies, with Microsoft accepting Bitcoin for digital goods in 2014. The launch of Ethereum in 2015 introduced smart contracts, expanding the potential applications of blockchain technology and launching significant interest in decentralized finance (DeFi) as an alternative to the traditional financial (TradFi) system — efforts to improve transaction speeds led to the Lightning Network going live in 2018.

The involvement of Big Tech giants like Meta through Facebook (with its Libra/Diem project in 2019) and PayPal (enabling crypto transactions in 2020) further legitimized cryptocurrencies from mainstream institutions. In a groundbreaking move, El Salvador became the first country to adopt Bitcoin as a legal tender in 2021, while the Lightning Network's capacity exceeded 3,000 BTC by 2022, showcasing the ongoing evolution and growing acceptance of cryptocurrencies as a payment method. Most recently, the approval of spot BTC / ETH ETF in the US by the SEC has marked a paradigm shift in increasing access to crypto for mainstream investors, who do not want to deal with the technical challenges of self-custody or rely on centralized or decentralized exchanges (CEXs / DEXs).



## 5. Payment Value Chain

### Summary of Four Main Stakeholders in the Value Chain

1. An acquirer or processor which calls the bank to authorize the payment. The acquirer's role is always to request authorization, which the bank always gives. Historically, banks were acquirers, but it was hard to keep up with always having the best technology, so tech players like Adyen emerged.
  1. Acquirers also process the payment by managing the technical processes involved in authorizing, clearing, and settling transactions among issuing banks, acquiring banks, and merchants.
  2. Payment processors also enable merchants to accept various payment methods, including credit cards, debit cards, and mobile wallets.
2. The bank, which agrees or does not agree on whether funds are in the account, sends the confirmation through the card network.
3. The card network, or other payment rails, is the rail through which funds pass from one bank account to another.

4. Gateways (for online payments) connect merchants with different acquirers and are almost like mini orchestrators.

The fee application process between when a customer makes a payment and when a merchant receives it involves several steps and various entities.

### Payment Initiation

The transaction begins when a customer pays using a credit or debit card. This step involves the customer's bank (issuer), the merchant's bank (acquirer), the card network (e.g., Visa, Mastercard), and the payment processor.

## 5. Payment Value Chain

### Transaction Fees

Several types of fees can be applied:

- **Interchange Fees** — Paid by the merchant's bank (acquirer) to the customer's bank (issuer) to compensate the issuer for the transaction risk. They are usually a percentage of the transaction plus a fixed fee and can vary by card type, transaction type, and merchant category.
- **Assessment Fees** — Charged by the card networks (Visa, Mastercard, etc.) for their use. Like interchange fees, they are a percentage of the transaction set by card networks and are similar for all merchants.
- **Processor Fees** — Fees charged to merchants by payment processors or companies handling transactions. These can be fixed per transaction or a percentage of it.

### Authorizations

Here, the payment processor sends the transaction details to the card network, which routes them to the issuing bank for authorization. The issuer checks for sufficient funds or credit limit and approves or declines the transaction.

## 5. Payment Value Chain

### Clearing & Settlement

The transaction goes through clearing and settlement:

- **Clearing** — Exchange of transaction details between acquirer, card network, and issuer. The card network communicates the authorized transaction to the acquirer and issuer.
- **Settlement** — Actual funds are transferred from the issuer to the acquirer. The acquirer then credits the merchant's account minus fees.

### Merchant Receives Funds

The time it takes for the merchant to receive the funds can vary, but it typically ranges from 1 to 3 business days.

### Additional Fees

Merchants could also face additional fees:

- **Chargeback Fees** — Occur when a customer disputes a transaction, and it is reversed.
- **Gateway Fees** — This occurs when the merchant uses a payment gateway for online transactions.
- **Batch Processing Fees** — Some processors charge a fee for batching and submitting transactions for settlement.
- **Fee Structure Interchange**
  - Visa and Mastercard: Around 1.5% to 2.5% of the transaction amount plus \$0.10 to \$0.30 per transaction.
  - American Express: Typically higher, around 2.5% to 3.5% of the transaction amount.

## 5. Payment Value Chain

### Assessment Fees

- Visa: Approximately 0.13% of the transaction amount.
- Mastercard: Approximately 0.11% of the transaction amount.
- American Express: Around 0.14% of the transaction amount.
- Discover: Around 0.13% of the transaction amount.

### Processor Fees & Gateway Fees

A payment gateway collects and verifies a customer's credit card information, ensuring the details are correct for online transactions. It transmits this information to the payment processor, communicating with the merchant, credit card company, and banks to manage fund transfers.

Both are essential because they specialize in different aspects of the transaction process. The payment gateway captures the payment details, encrypts the information, and sends it to the payment processor. Then, the payment processor receives the information,

communicates with the card network and the issuing bank to authorize the transaction, and coordinates the settlement process.

### Processor Fees

- Transaction Fees — Typically range from 0.10% to 0.30% of the transaction amount plus \$0.10 to \$0.30 per transaction.
- Monthly Fees — Can range from \$10 to \$50 per month.
- Additional Service Fees — Fees for added services like fraud protection, PCI compliance, and chargebacks vary widely but typically range from \$10 to \$30 per month for each service.

### Gateway Fees

- Transaction Fees — Around 0.10% to 0.30% of the transaction amount plus \$0.10 to \$0.30 per transaction
- Additional Service Fees — Typically range from \$10 to \$25 per month.

## 5. Payment Value Chain

### Chargeback Fees

Typically, it ranges from \$15 to \$25 per chargeback.

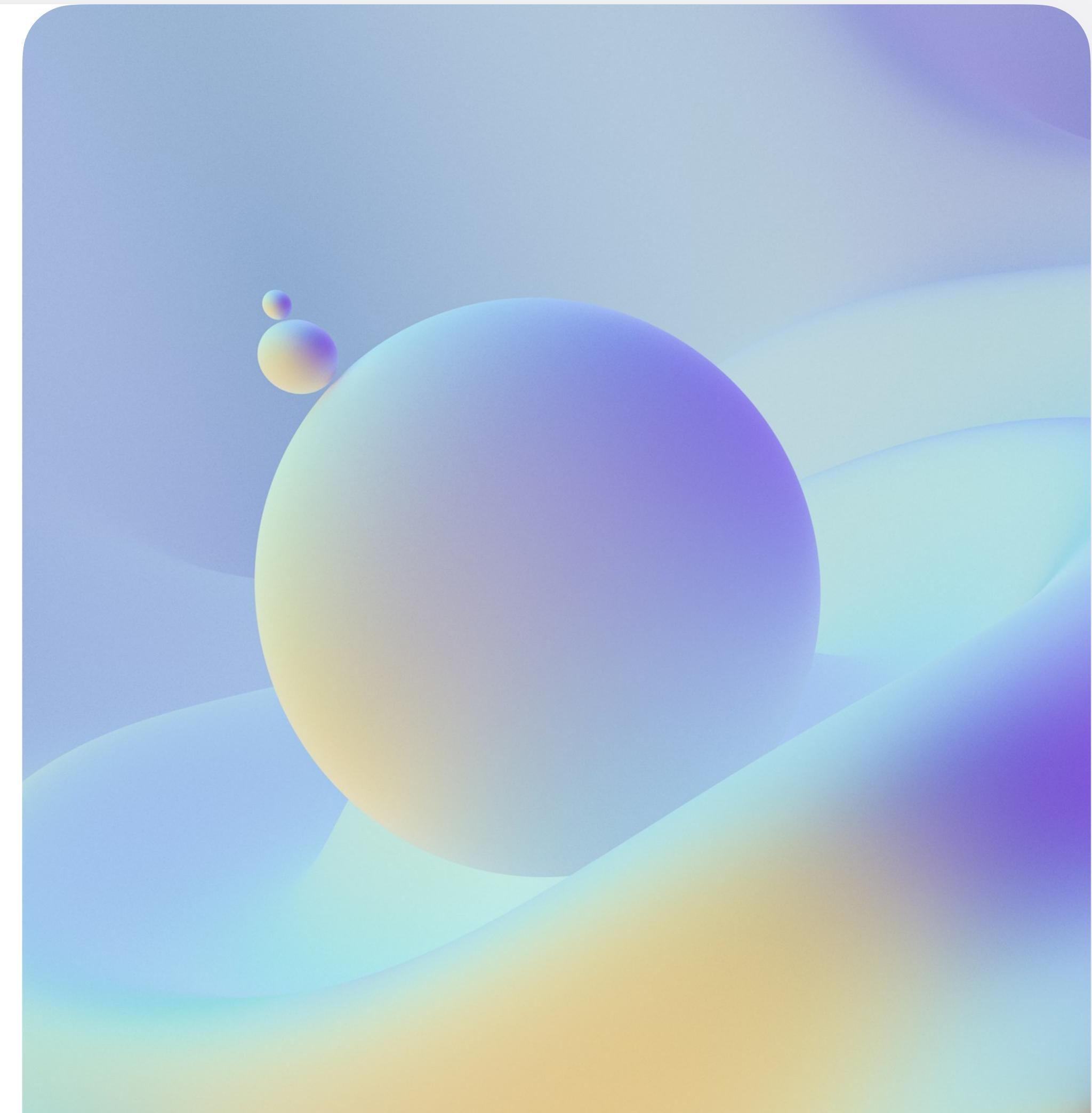
#### Example

1. A customer makes a \$100 payment
2. Interchange Fee:  $1.75\% \text{ of } \$100 + \$0.10 = \$1.85$
3. Assessment Fee:  $0.13\% \text{ of } \$100 = \$0.13$
4. Processor Fee:  $0.20\% \text{ of } \$100 + \$0.10 = \$0.30$
5. Total Fee:  $\$1.85 + \$0.13 + \$0.30 = \$2.28$

Therefore, the merchant would receive:  $\$100 - \$2.28 = \$97.72$

#### Sources:

- <https://www.adyen.com/knowledge-hub/interchange-fees-explained>
- <https://www.mastercard.us/en-us/business/overview/support/merchant-interchange-rates.html>
- <https://stripe.com/en-fr/resources/more/credit-card-processing-fees-explained>
- <https://www.forbes.com/advisor/business/credit-card-processing-fees/>
- <https://www.nerdwallet.com/article/small-business/credit-card-processing-fees>



## Quote



**Carolin Wais**

Partner EMEA  
Plug and Play Tech Center

**"I believe that in the next few years, authorized push payment fraud is on the rise. It's expected to grow at a CAGR of 20%+, which makes it a vast area for startups to explore. Three main factors drive this: 1) Increasing digital activities of the population, 2) Effective application of Gen AI by fraudsters, and 3) Increasing adoption of real-time payment networks with limited consumer protection. This significantly impacts the reputation and opex of financial institutions and will be a key area for investment and innovation. We have also seen more startups in eye payment. Areas that have suffered from a lack of investments have been BNPL and Web3-related companies.**

**While Fintech funding fell 42% in 2023, 2024 will likely be more active again. Financial institutions must find innovative solutions for increasing fraud, cybersecurity risks, and rising customer expectations and will commit to more projects with startups again. This will positively impact the VC market. On top of that, there is still a large amount of dry powder in the market, interest rates are decreasing again, and AI opens much room for innovation."**

# Tech Trends — All Trend — Biometrics Payments

## Intro

Is using facial recognition or palm scans for payment already a reality, or is it just a potential future development? From Mercedes' latest fingerprint payment in-car system to Amazon's pay-by-palm technology, biometric payment has seen a surge in adoption since 2010, especially with smartphones using facial recognition via cameras.

fingerprints, with fingerprint and facial payment being the most common (28% of Americans use these to verify their online smartphone transactions [\(source\)](#)). While historically, biometric algorithms relied on pattern recognition, the latest solutions rely on Machine Learning. For instance, Facebook's DeepFace and Amazon's Rekognition employ machine learning. While traditional biometric systems can struggle with poor-quality or partial samples, machine learning and AI algorithms handle these challenges more effectively [\(source\)](#). Interestingly, in-store biometrics payments have been adopted more slowly.

## Key Numbers

- According to Visa, more than 70% of consumers saw biometric payment as a more straightforward payment method in 2021. [\(source\)](#)
- Biometrics payment's value is expected to reach \$5.8T and three billion users, according to the Goode Intelligence. [\(source\)](#)

Biometrics, i.e., physical features, authorize transferring funds from a customer's bank account. Consumers can pay using various biometrics, such as palm vein, facial and iris recognition, and

Latest developments in palm vein identification, mainly thanks to more extensive training data of palms and with research primarily coming from China, have pushed Big Tech companies and startups to leverage this biometrics method as being the most user-friendly, secure, and efficient one and betting on it transforming the physical retail experience. In fact, Amazon and JP Morgan have recently launched their palm vein hardware solution in 2022 and 2023 in the USA, while Chinese companies have been using the technologies since 2015. This typically works using a palm sensor after onboarding and linking one's palm to its bank account with the provider.

# Biometrics Payment: A Timeline

**2015**

In 2015, Ant Banking (Alibaba) became one of the pioneering organizations that implemented facial recognition for payments. Chinese KFC customers could make payments by smiling at cameras as early as 2015, thanks to the company's Smile to Pay facial recognition system. [\(source\)](#)

**2017**

Apple introduced its Face ID technology, powering iPhone users to authorize payment authentication with their face biometrics.

**2020**

Amazon is the first Big Tech corporation to test palm vein technology in an Amazon Go store in Seattle and Whole Foods stores.

**2021**

WeChat (Tencent) [reportedly](#) tested palm vein detection for payments in Shenzhen.

**2022**

MasterCard launches its Biometric Checkout Program pilot in Brazil, allowing consumers to smile at or wave their hands at the camera to pay.

**2023**

MasterCard works with NEC to create a biometric fingerprint card to eliminate the need to type a password.

JP Morgan launches its first palm vein payment hardware in US shops and for the Miami Grand Prix.

**MAY**

**WeChat** officially launches its palm recognition service for [WeChat Pay](#), which allows citizens to pay the tube with their palms over a scanner [\(source\)](#). This service is later deployed in grocery shops, gyms, and universities.

**2024**

**FEBRUARY**

Five, a UK-based palm vein biometrics solution, raised its seed round.

**FEBRUARY**

Visa previews its pay-by-palm biometric payment at a Singapore Innovation event. [\(source\)](#)

**JUNE**

Mastercard deployed its facial recognition solution in Europe. [\(source\)](#)

## Plug and Play Insights

Travel has been the most popular in-person use case for biometric technologies due to the many checkpoints and the necessity for security. In-store payments have been primarily adopted in China, where facial recognition payments have been present for at least five years. It has been tested and adopted more in Asia, the USA, and Latin America than Europe. Indeed, Mastercard launched its facial recognition payment program first in Brazil, Amazon and JP Morgan launched in the USA, and Five's go-to-market is to target the USA, too. While there has been an increase in adoption, it remains slower than other payment methods for some reason. Some risks we identified involve merchants needing to purchase more hardware, skepticism around onboarding friction, or risk of impersonation with AI advances.

Nevertheless, thanks to open banking, we still see the opportunity for a more seamless queue and payment flow once onboarded and transaction fees are cut. Pay-by-palm is gaining interest because it is even more secure and user-friendly than other biometric methods. Unlike facial features or fingerprints, which can change with age or injury, the data used in palm scanning remains consistent.



# Startup Interview



**Maria Marti  
Garcia**  
Five

## **1. How do you see the biometrics in-store payment space evolving?**

Biometric payment solutions are increasingly expanding across the globe. We see trends in palm biometrics checkouts evolving in Asia with Tencent and in the USA with Amazon One. Increasingly, there will be more players in different geographies. There is a demand for faster-personalized checkouts. The in-store checkout experience would need to pick up with the online checkout offering. Bringing the one-click checkout approach we've been enjoying online for over a decade into the in-store space has traditionally lacked innovation.

## **2. How is Five answering these opportunities?**

Five is at the forefront of addressing these demands with its cutting-edge platform based on palm biometrics. This platform not only speeds checkout threefold but also significantly reduces merchant payment processing fees by bypassing Visa and Mastercard. What sets Five apart is its unique combination of payments and loyalty programs into a single, seamless step—just a wave of the hand—while processing payments outside traditional card schemes. This holistic approach makes Five an exemplary solution in the evolving biometrics payment space.

## **3. How can retailers leverage and maximize your type of solution?**

Biometric checkouts, such as those offered by Five, dramatically reduce queues, enhancing the overall shopping experience. By leveraging Five's platform, retailers can streamline their checkout processes, improve customer satisfaction, and boost loyalty through integrated rewards programs.

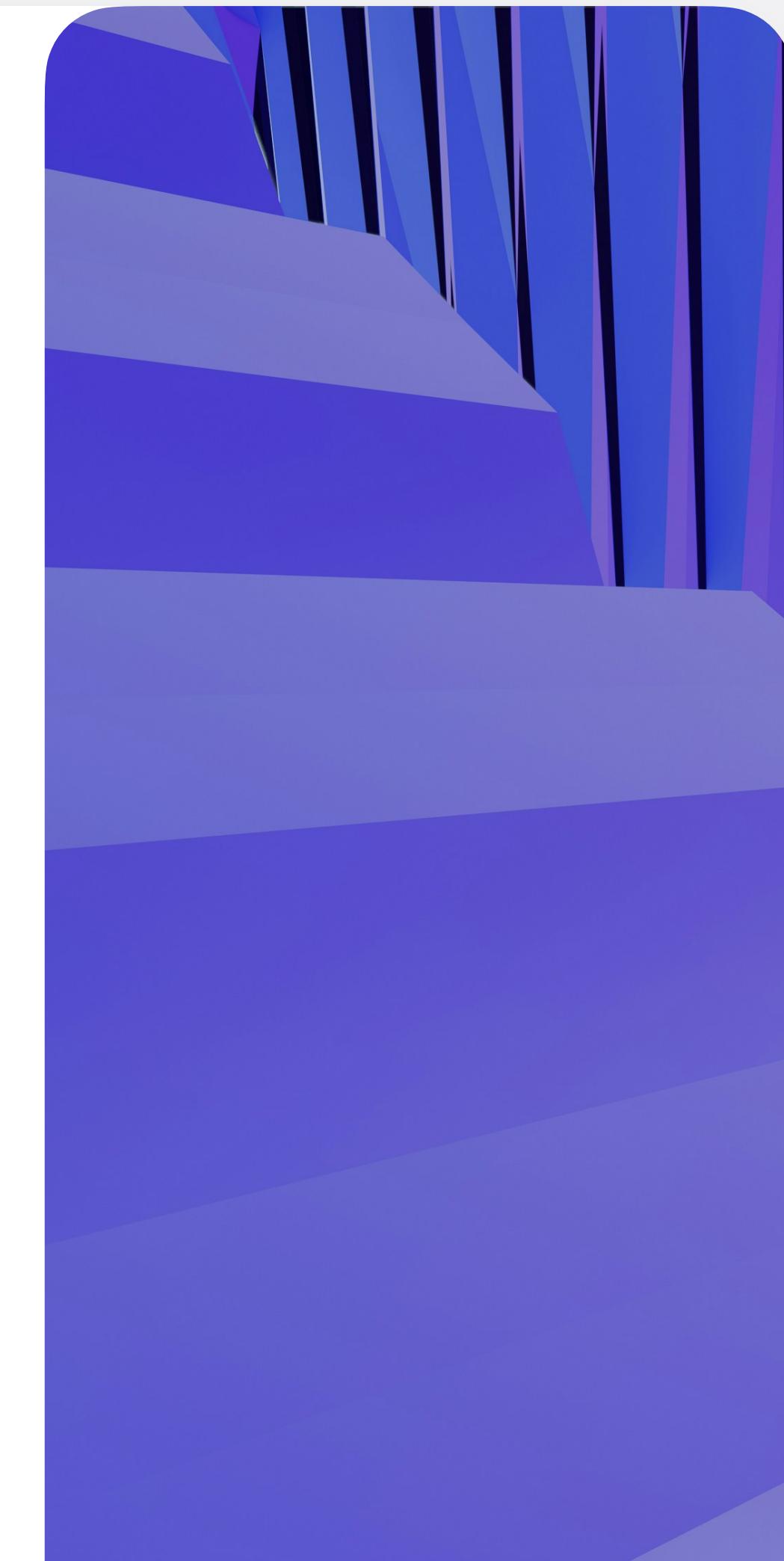
## Startup Highlight



PayHuman is building a biometric payment solution for retailers using palm scanning. By using open-banking technology and ACH rails, PayHuman can cut payment costs considerably, giving it a considerable advantage over card payments.



A contactless payment system using facial recognition for physical retail. It leverages its proprietary facial recognition technology with recognition accuracy greater than 99%.



## Trend 2 — BNPL

### Alternative Payments: BNPL, Trade-in, Save-Now-Buy-Later

Traditional card payment systems that have long been dominant now encounter new competitors utilizing cutting-edge technologies that offer faster and more convenient payment transactions. These include Buy-Now-Pay-Later (BNPL), Save-Now-Buy-Later (SNBL), Pay-By-Bank, and even extensions of BNPL solutions such as trade-in payments.

#### BNPL

The popularity of BNPL, which divides purchases into smaller payments with little to no interest, is continuing to increase. The first solutions emerged in 2005. Leading providers include Klarna, Affirm, Afterpay, and Apple Pay Later. In 2023, Apple introduced Apple Pay Later in the USA, allowing users to divide payments into four installments over six weeks without incurring interest or fees.

Current macroeconomic conditions and higher interest rates push consumers to seek more flexible payment methods, including BNPL. Findings from the Research FDI show that 50% of BNPL users prefer this over credit cards ([Capgemini](#)). In the UK, the volume of the “buy now, pay later” market has more than quadrupled in size since 2020 and is expected to reach a record total of £30bn this year ([The Guardian](#)). A record \$25.9 billion of e-commerce spending between January and April in the USA was driven by BNPL platforms, as shoppers “embrace more flexible ways to manage their budgets. That’s an 11.8% jump in BNPL spending from a year ago. Adobe also expects BNPL to drive up to \$84.8 billion of consumer spending in 2024, roughly 13% more than last year([source](#)). Gen-Z and Millennials are the primary targets of BNPL solutions. These days, retirees and others on fixed incomes have become some of the fastest-growing users of the apps, and high interest rates have killed off some entrants into the field ([Bloomberg](#)).

#### B2B2C BNPL



#### B2B2B BNPL



#### BNPL Infrastructure



## Trend 2 — BNPL

Research from Capgemini reveals that 50% of BNPL users prefer this method over credit cards. In the UK, the size of the “buy now, pay later” market has grown more than fourfold since 2020 and is projected to reach a record total of £30 billion this year ([The Guardian](#)). In the USA, BNPL platforms drove a record \$25.9 billion in e-commerce spending between January and April, reflecting an 11.8% increase from the previous year. While initially targeted at Gen Z and Millennials (making up 75% of BNPL customers), BNPL solutions are now seeing significant adoption among retirees and others with fixed incomes. While still popular, it's not without saying that the space has its challenges.

The Fintech industry hit a record high in 2021, but with the latest increase in inflation and market volatility, the VC ecosystem is looking for profitability, which FinTech startups find challenging. The [F-Prime FinTech Index](#) — made up of 55 of the world's most prominent FinTechs — dropped 72% by the end of 2022. This highly impacted BNPL providers' valuation and stock price. For instance, Affirm and Klarna have laid off many employees in the last few years. While being the fastest fintech vertical, most are still not profitable, mainly due to many not charging interest and just a commission from the merchant side ([source](#)).



## Trend 2 — BNPL

### Plug and Play Insights and Considerations

The space is very much divided by geographies, with players emerging from Latin America (Aplazo), the USA, France, the Middle East (Tamara), India (Simpl), and Africa (Float). It's also highly crowded, with over 200 startups competing. With BNPL solutions being more and more commodities, merchants must present different providers, making the space even more competitive, or choose highly differentiated solutions.

To adapt to this new environment, we have seen an evolution of BNPL providers testing new revenue sources and differentiating features:

- **Subscription models**
- **Advertising**
- **Discount features**
- **Shopping recommendations**
- **Spending analytics**
- **Debit services and virtual cards**
- **Insurance options**

For example, Afterpay includes in-app advertisements, and Klarna shows product price notifications to customers ([source](#)). Klarna is an excellent example of diversification by purchasing Hero, a social shopping platform, or even Toplooks, an AI-powered tool for generating shoppable content and other influencer marketing and loyalty solutions. We might also observe heightened merger and acquisition activity in this sector, as established companies seek to acquire essential capabilities and BNPL providers seek solutions for their funding issues ([source](#)).



JOIN THE PLATFORM  
[PNPTC.COM/JOIN](http://PNPTC.COM/JOIN)

## Startup Highlight



Zilch is a BNPL solution. The fundamental difference between Zilch and the traditional BNPL companies is that their customer is the merchant, while Zilch interacts directly with the customer.



## Trend 2 — BNPL

### Save-Now-Buy-Later

BNPL has opened doors to new alternative payment methods, such as Save-Now-Buy-Later (SNBL). For example, Split transitioned its focus to SNBL, BNPL leader Klarna has introduced “pools” for savings purposes to its German users, and back in 2022, Apple allowed Apple Card users to use the Apple Wallet app to establish, manage, and deposit funds into a high-yield savings account offered by Goldman Sachs. SNBL solutions offer savings features to assist users in setting aside funds for future purchases, either directly from the merchant’s website, as a B2C app, or inside existing banking apps. Users of SNBL often receive enticing cashback, rewards, or discounts to save and make purchases from specific merchants ([source](#)). These solutions get value by monetizing transaction and customer data to support brands and merchants in forecasting revenues, identifying customer segments with high purchasing intent, and gaining business insights to optimize the shopping experience.

One of the leading players is America’s Accrue Savings, which recently secured a \$25 million Series A funding round led by Tiger Global in 2022. Other solutions include Austria’s Monkee and the UK’s Cashmere, focusing on women. In emerging markets, particularly in

India, the SNBL model is gaining significant traction, with platforms like Tortoise, Hubble, and Multipl leading the way ([source](#)).

### Plug and Play Insights

Save-Now-Buy-Later first emerged in India and has seen more traction in emerging countries, where saving is preferred over borrowing solutions like BNPL. Overall, it seems like the need for merchants to offer these types of solutions is yet to be proven. In fact, the majority of solutions are adopting a B2C approach or directly integrated into bank apps. The latter seems like the most user-friendly experience, although it may be harder to commit to or with less reward for each consumer.

## Startup Highlight



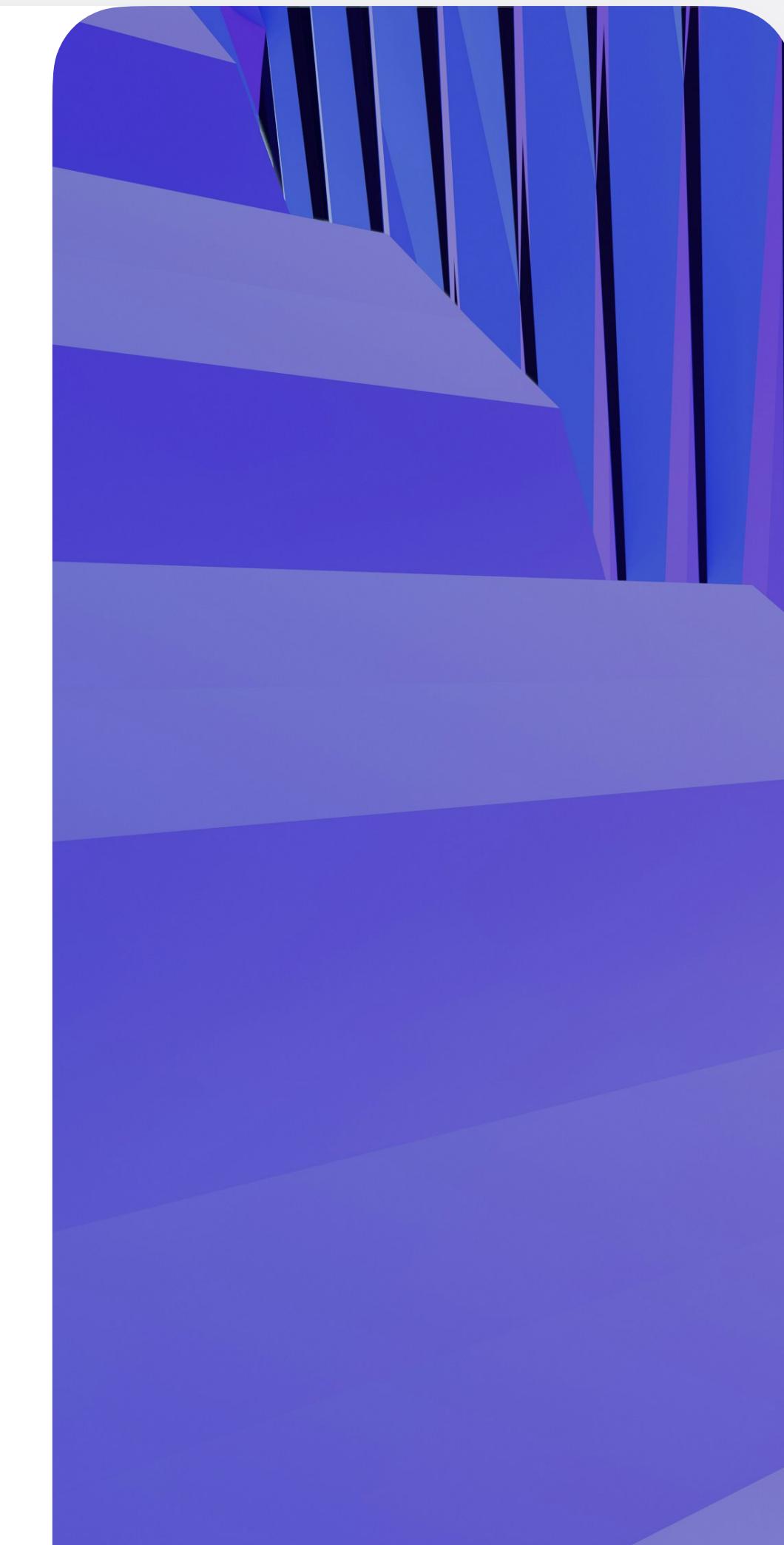
Monkee offers an alternative to the prevalent “Buy Now, Pay Later” model. It gamifies savings plans, encouraging users to save with a clear purpose and consume wisely.



Accrue Savings helps brands incentivize shoppers with cash rewards when they save up for their favorite purchases.



Sync Savings helps people save money effortlessly by integrating savings accounts into their existing apps. They partner with various banks and distributors to offer these savings solutions, aiming to make the saving process simple and regular for users.



## Quote



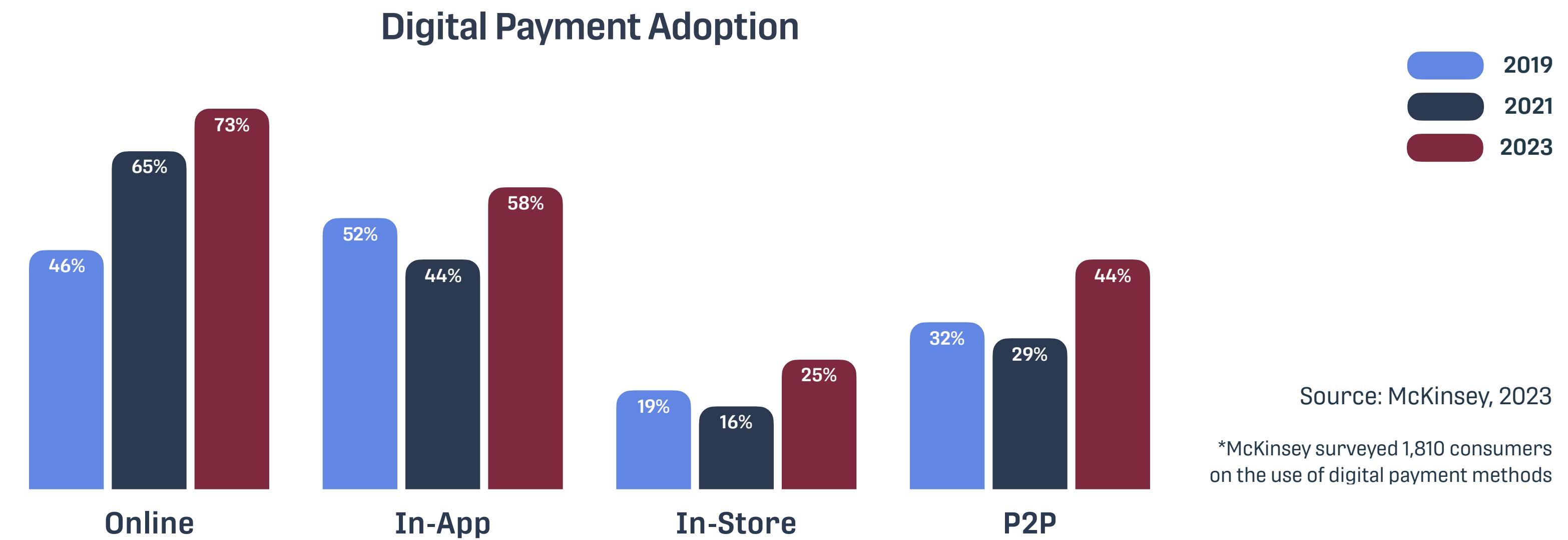
**Damien Launoy**

Managing Director  
115K (CVC of La Banque Postale)

**"There is still considerable potential to be leveraged to enrich the customer journey and improve payment immediacy while strengthening transaction security. We believe that the maturity of open banking, the emergence of more precise use cases for blockchain technologies, and continued advances in AI should enable a new wave of innovation for customers and financial institutions in these areas. For example, I think of real-time services offered with the transaction, without compromising on fraud risk: split payment, personalized insurance, etc."**

## Trend 3 — Digital Experiences

In 2024, digital payment experiences will continue redefining how consumers and businesses interact with financial transactions. This trend encompasses integrating seamless, intuitive, and engaging digital interfaces into payment processes, significantly enhancing user experience and satisfaction. According to McKinsey, more and more consumers are reporting using some form of digital payment. The leading category remains online purchases. There is also a trend towards consolidation of digital wallets, with fewer consumers using multiple wallets and more relying on a single one.<sup>7</sup>



<sup>7</sup> McKinsey, 2023: <https://www.mckinsey.com/industries/financial-services/our-insights/banking-matters/consumer-digital-payments-already-mainstream-increasingly-embedded-still-evolving>

# Trend 3 — Digital Experiences

## Why is this a trend?

### 1. Technological Advancement

Rapid technological advancement, including AI, machine learning, and blockchain, has created more sophisticated and secure payment solutions. AI is revolutionizing payment systems by improving fraud detection, personalizing user experiences, and automating customer service. Blockchain technology is enhancing transaction security and transparency, fostering trust among users.— Damien Launoy, Managing Director at 115k (CVC of La Banque Postale).

### 2. Consumer Demand for Convenience & Speed

Consumers are increasingly demanding fast and convenient payment options. Digital payment methods like contactless payments and mobile wallets offer speed and ease, eliminating the friction associated with traditional payment methods. In fact, the total value of digital wallet transactions is expected to surpass \$16 trillion in 2028, and by 2025, digital wallets will account for 52.5% of all transaction value. This shift is driven by the need for immediate, hassle-free transactions that fit into the fast-paced lifestyle of modern consumers.

### 3. Surge in E-Commerce and Mobile Commerce

The global e-commerce market is projected to soar to \$51.2 trillion, while the mobile commerce market is expected to reach \$1,251.25 billion by 2030. Both sectors are expected to endure strong growth, with the e-commerce market expanding at a CAGR of 18.90% and the mobile commerce market at a CAGR of 17.60% from 2022 to 2030.<sup>8</sup> This global surge underscores the need for innovative payment solutions that cater to digital-first preferences. As online shopping and mobile transactions thrive, businesses increasingly adopt digital payment systems to enhance the shopping experience and meet consumer expectations for fast and secure payments.

# Trend 3 — Digital Experiences

## Other Considerations

### 1. Loyalty & Rewards

Loyalty and Rewards programs play a crucial role by driving customer retention and increasing spending. According to the Loyalty Report, 64% of loyalty program members spend more to maximize their points.<sup>9</sup> This suggests that programs are effective in encouraging higher customer expenditure. On top of that, the loyalty management market is expected to grow significantly, from \$13.31 billion in 2024 to \$41.21 billion by 2032. Again, this highlights increased investment in the space and how important businesses take it. These programs aim to promote repeat business and enhance customer satisfaction and loyalty, which would lead to sustained revenue growth for companies.

### 2. Personalization

Personalizing payment processes significantly boosts customer experience and drives business growth. Companies that excel in this area see 40% more revenue than their competitors, highlighting its financial benefits. Additionally, 90% of customers are willing to spend more with businesses that offer personalized services, and 80% prefer brands providing tailored experiences. This approach also enhances customer satisfaction and loyalty, with 76% of consumers more likely to repurchase from brands that

<sup>8</sup> Kings Research, 2023: <https://www.kingsresearch.com/e-commerce-market-149>

<sup>9</sup> The Loyalty Report, 2021: [https://dc-docs.dcatalog.com/Bond-Brand-Loyalty/TLR-2021/ea224c14-999b-404d-9ec9-c2bd8a2ffab3/TLR2021\\_ExecutiveSummary\\_USA.pdf?v=1635197511190.2676058934113973](https://dc-docs.dcatalog.com/Bond-Brand-Loyalty/TLR-2021/ea224c14-999b-404d-9ec9-c2bd8a2ffab3/TLR2021_ExecutiveSummary_USA.pdf?v=1635197511190.2676058934113973)

<sup>10</sup> McKinsey, 2021: <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/the-value-of-getting-personalization-right-or-wrong-is-multiplying>

personalize their interactions.<sup>10 11</sup>

### 3. Gamification

Gamification is becoming critical for amplifying customer engagement and driving business growth. Businesses can enhance user interaction and satisfaction by adding game-like elements such as points, badges, and leaderboards. For instance, gamifying a website can increase browsing time by up to 30%, which leads to higher customer retention and conversion rates.<sup>12</sup>

### 4. Live Commerce

Live commerce, which allows consumers to make purchases during live broadcasts, is rapidly growing. It is merging the excitement of social media with the ease of e-commerce. In the United States, the live commerce market is projected to reach \$35 billion by 2024.<sup>13</sup> In China, where live commerce began, it generated around \$171 billion in sales in 2020, demonstrating its vast potential. Moreover, live commerce reduces cart abandonment by integrating a seamless checkout process within the live session. It streamlines the payment experience and increases conversion rates. With platforms like TikTok, Facebook, and Amazon adopting live shopping, this trend is revolutionizing online retail by making shopping more interactive, engaging, and efficient.

<sup>11</sup> McKinsey, 2021: <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/the-value-of-getting-personalization-right-or-wrong-is-multiplying>

<sup>12</sup> Optinmonster, 2024: <https://optinmonster.com/gamification-in-marketing/>

<sup>13</sup> AOV UP: <https://aovup.com/stats/live-commerce/>

## Trend 3 — Digital Experiences

### Plug and Play Insight

The trend towards digital experiences in payment is a response to consumers' evolving needs and preferences. By leveraging technological advancements and addressing the demand for convenience and speed, businesses are transforming the payment landscape, making transactions more secure, efficient, and user-friendly. This trend not only enhances user experience but also drives higher satisfaction and loyalty among consumers, setting a new standard for financial interactions in the digital age.



# Expert Interview



**Vassilina Walford**  
Founder at Payment  
Vibes

## 1. How do you see open banking benefiting marketers?

Traditionally, marketers relied on third-party cookies to track shoppers' online visits, providing valuable information to advertisers and brands for targeting audiences and managing marketing campaigns. However, with the phase-out of third-party cookies (see <https://privacysandbox.com>), marketing teams face significant reductions in their targeting capabilities. At the same time, Open Banking, driven by PSD2, the European regulation that extends to new payment service providers and regulates the sharing of banking data enables Merchants and Fintech companies to access first-party payment data with explicit customer consent. Having access to first-party payment data is an invaluable asset for businesses. Open Banking introduced two types of service providers: Account Information Service Provider (AISP) and Payment Initiation Service Provider (PISP). AISPs aggregate and use data from various customer bank accounts, leveraging this information for a range of purposes, such as enhancing the purchasing journey, offering relevant promotions and rewards, and designing personalized loyalty programs.

## 2. How can merchants better leverage transaction data?

First-party payment data enables numerous use cases by providing detailed insights into shopper behavior and a comprehensive (360-degree) view of customer purchasing habits and preferences. Merchants can utilize this data to understand shopper behavior within their own points of sale (whether online or physical stores) and across competing brands. Leveraging this information enables the creation of tailor-made shopping experiences, targeted marketing campaigns, enhanced customer engagement, new service offerings, and personalized loyalty programs. This omnichannel data offers merchants a holistic view of customer purchases across all channels.

## 3. What innovations have you seen in the space?

As payment data is no longer the exclusivity of banks, there is significant innovation potential. Startups are creating new products such as electronic receipts, loyalty programs, marketing campaigns, seamless customer authentication, and peer-to-peer payment platforms. More broadly, open banking drives collaboration between traditional financial institutions and fintech companies, cultivating a culture of innovation. It extends across various sectors, including retail, personal wealth management, and banking as a service, while also expanding into new use cases like embedded insurance.

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## Startup Highlight



Badge is a platform that enables the creation and management of digital wallet passes for Apple and Google Wallets, offering features such as a no-code pass builder, push notifications, dynamic QR codes, and NFC capabilities.



Quidkey specializes in embedded finance technology, enabling banks to offer financial products and flexible payment options directly at the point of purchase. They provide solutions for banks to integrate checkout systems, enhance customer loyalty, and generate additional revenue. Quidkey offers merchants reduced transaction fees, instant settlement, enhanced security, and access to trusted bank brands. Their services aim to reduce reliance on external fintechs, improve competitive advantage, and provide seamless integration with various e-commerce platforms.



## Trend 3 — Digital Experiences

### Quote



**Rob Zeko**  
Co-Founder & CEO at Quidkey

**"We've seen a major trend in financial services with institutions aspiring to own the end-to-end payments ecosystem with their customers. Banks have spent a remarkable amount of money building technical infrastructure and, until recently, have only been able to extend financial products to their customers through card-based products. With the evolution of API infrastructure, banks now have the power to extend their products/services into various customer journeys and create more profitable transactions for themselves and merchant partners. Quidkey's infrastructure technology gives banks the ability to distribute payment products directly to their customers in a non-intrusive bank-branded experience, providing scaled distribution through acquiring partners and removing intermediaries. The solution is platform agnostic and provides various ways to make payment products more accessible, centralized, and secure from financial institutions."**

## Trend 4 — Fraud & Security Measures

### Quote



**Rafik Shamsudin**  
Fintech Investor  
Start Ventures

**"In the next 24 months, I believe many funded solutions in this space will focus on back-office optimizations. These solutions could range from augmenting fraud investigators in analyzing suspicious transactions to optimizing treasury workflows for specific industries. The current wave of LLMs enables these workflows to be mimicked rather than changed, significantly reducing the friction to adoption."**

## Trend 4 — Fraud & Security Measures

Payment fraud refers to any unauthorized or illegal transaction conducted using a payment instrument, such as a credit card, debit card, or any other form of payment method, with the intent to defraud the payment system, the cardholder, or a merchant. It involves the exploitation of vulnerabilities in the payment process to steal money, obtain goods or services without paying, or gain unauthorized access to financial resources.

**Payment fraud is increasingly becoming a significant challenge worldwide, with:**

- Losses due to fraud in global e-commerce hit \$41 million in 2022 and are expected to surpass \$48 billion in 2023.<sup>14</sup>
- 2.6M fraud reports in 2023. That number was 1.91M in 2019, an increase of 37.21%.<sup>15</sup>
- US APP fraud losses were at \$1.94 billion in 2022 and rising by over 56% to \$3.03 billion by 2027.<sup>16</sup>
- The median fraudulent charge jumped by 26% in the last two years (2022-2024), rising from \$79 to \$100.<sup>17</sup>
- Global merchant losses from online payment fraud exceeded \$362 billion between 2023 and 2028, with \$91 billion in losses expected in 2028 alone.<sup>18</sup>



## Trend 4 — Fraud & Security Measures

The rise in payment fraud is driven by the increased use of digital and contactless payment methods, advanced technologies fraudsters use, and fragmented payment ecosystems. Fraudsters are leveraging AI to create sophisticated attacks, and fraud-as-a-service models make it easier for less skilled individuals to engage in fraud. Additionally, businesses face challenges in keeping up with evolving regulations and managing the high volume of transactions, which overwhelms existing fraud detection systems.

In 2024, organizations have several tools that they can use to prevent payment fraud. A LexisNexis study from 2022 suggests that the least used ones involve AI and Machine Learning. We can imagine that since then, the number of tools involving AI/ML has increased, and it will continue to do so in the coming years. Gartner predicts that 80% of enterprises will have used Generative AI APIs or deployed Generative AI-enabled applications by 2026, and this number includes AI-powered security and risk solutions.<sup>19</sup>

<sup>14</sup> Mastercard, 2024: <https://b2b.mastercard.com/news-and-insights/blog/ecommerce-fraud-trends-and-statistics-merchants-need-to-know-in-2024/>

<sup>15</sup> FTC, 2024: <https://public.tableau.com/app/profile/federal.trade.commission/viz/FraudReports/PaymentContactMethods>

<sup>16</sup> PaymentDive, 2023: <https://www.paymentdive.com/news/authorized-push-payment-fraud-banks-financial-services-ACI/702493/>

<sup>17</sup> Security.org, 2024: <https://www.security.org/digital-safety/credit-card-fraud-report/>

AI for fraud detection leverages multiple machine learning models to identify anomalies in customer behavior, connections, and account patterns that align with fraudulent characteristics. By assessing the risk of each login attempt and verifying users through behavioral data, these AI models enhance security and user experience, simplifying access for verified users and potentially reducing fraud costs by up to 90%.<sup>20</sup>

<sup>18</sup> Juniper Research, 2023: <https://www.juniperresearch.com/resources/infographics/online-payment-fraud-2028-verticals-fraudsters/#>

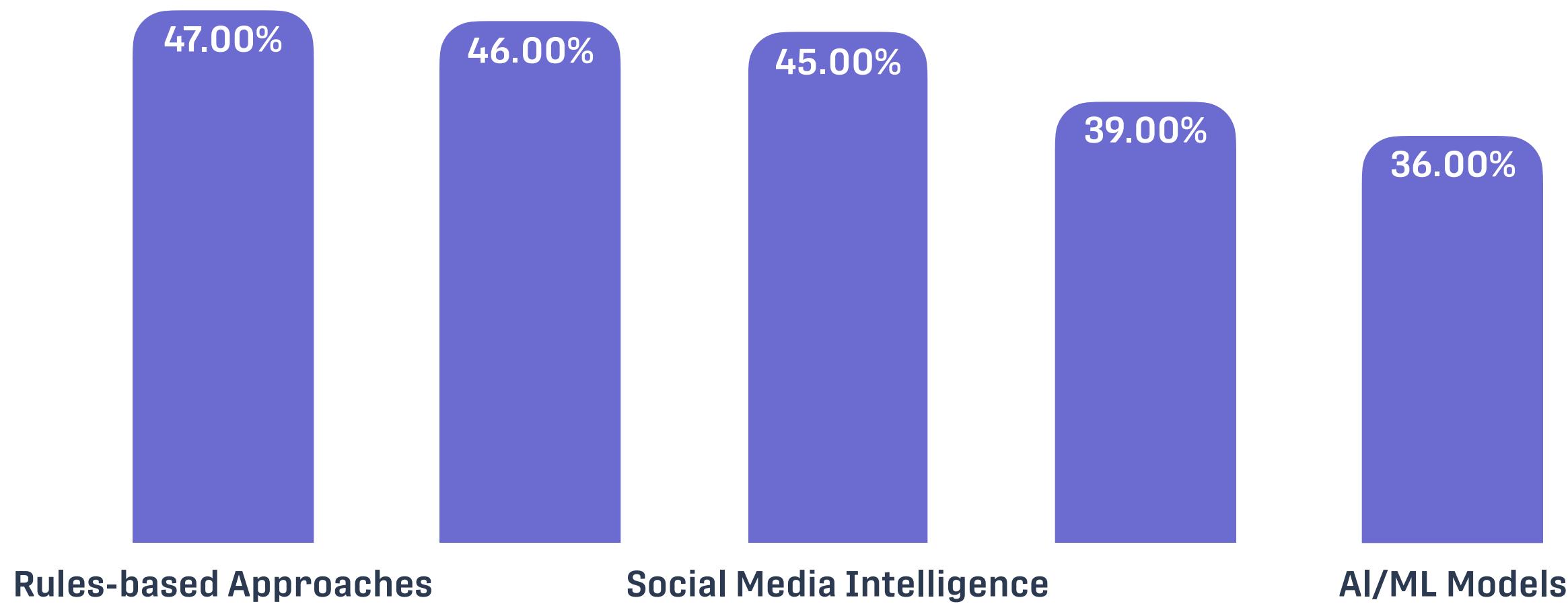
<sup>19</sup> Gartner, 2023: <https://www.gartner.com/en/newsroom/press-releases/2023-10-11-gartner-says-more-than-80-percent-of-enterprises-will-have-used-generative-ai/apis-or-deployed-generative-ai-enabled-applications-by-2026>

<sup>20</sup> IBM, 2024: <https://www.ibm.com/ai-cybersecurity#:~:text=AI%20models%20can%20help%20balance,fraud%20by%20up%20to%2090%25>

## Trend 4 — Fraud & Security Measures

### Current Fraud Detection Systems Are Not Enough

Supportive Capabilities Used By Organizations



\*Average distribution of transaction volume

## Trend 4 — Fraud & Security Measures

### Regional Responses to Payment Fraud

#### Asia

Singapore's MAS is developing a framework for equitable loss sharing from scams, consulting on scam types and responsibilities. Hong Kong's HKMA launched FINEST, an information-sharing platform to combat fraud, and promotes public awareness through the Anti-Scam Consumer Protection Charter.

#### Australia

Australia's ACCC established a National Anti-Scam Centre for coordinated anti-scam efforts. ASIC urges banks to improve scam prevention and response. There is debate over introducing a UK-style reimbursement scheme, with some opposition due to concerns about encouraging scams.

#### European Union

The European Commission's draft regulation will limit payment service providers' liability for APP fraud to cases of impersonation fraud. Customers must report fraud to the police promptly, with no liability for customer fraud or gross negligence.

#### United Kingdom

The Payment Services Regulator will introduce a rule requiring reimbursement for APP fraud from October 2024. Costs will be split between sending and receiving firms, except for international payments, first-party fraud, and gross negligence. Claims must be made within 13 months.<sup>21</sup>

#### United States

In the US, payment fraud regulations lack a requirement for customer authentication similar to Europe's PSD2 framework. Unlike Europe, where 3D-Secure (3D-S) is widely used to comply with PSD2, the US underutilized this authentication scheme. This results in "business as usual" transactions in the US having less data than in countries where 3D-S is encouraged or required. The additional data from 3D-S can help refine fraud prevention strategies, highlighting a significant regulatory difference between the US and other regions.<sup>22</sup>

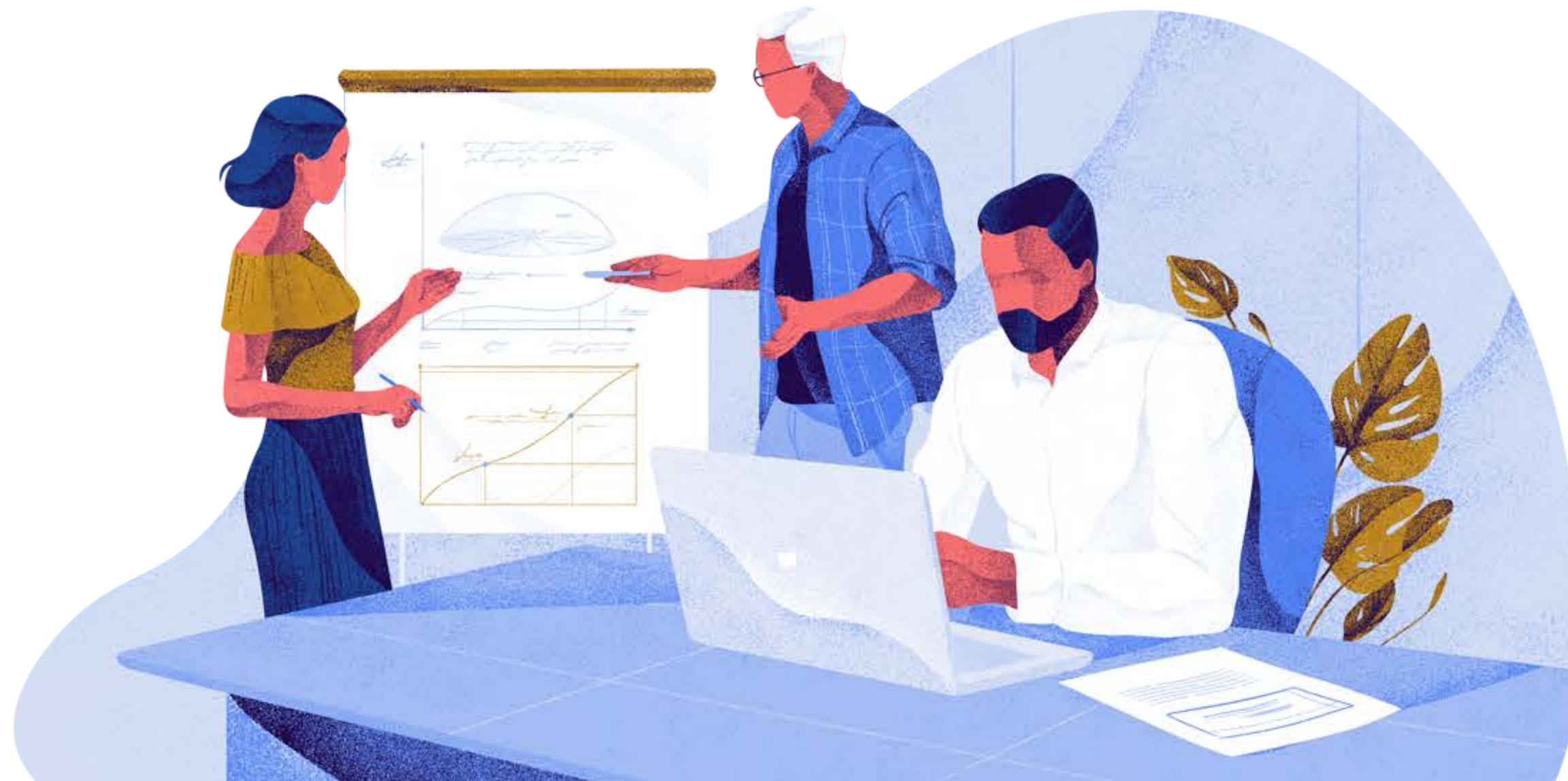
<sup>21</sup> The Banker: 2023: <https://www.thebanker.com/Global-approaches-to-regulating-rising-fraud-1696836353>

<sup>22</sup> Checkout, 2023: <https://www.checkout.com/blog/is-us-payments-fraud-becoming-too-big-to-fight>

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## Plug and Play Insights

The rise in payment fraud is a global issue requiring coordinated and robust responses from regulators, financial institutions, and technology providers. By understanding cybercriminals' evolving tactics and implementing stringent regulations, countries can better protect consumers and maintain trust in payment systems.



# Startup Interview



## **1. How do you see fraud in payment evolving?**

As bank systems have become more secure, fraudsters are attacking the human in the loop. This is where we see the rise of scams and social engineering—over 40% of reported financial crimes last year, and it is growing fast. The proliferation of AI and Real-Time Payments will only make this worse.

## **2. How is Tunic Pay answering these opportunities?**

At Tunic Pay, we are the only vendor built for Authorised Push Payment Fraud (APP). Our recipient intelligence enables banks to access the data they need to understand the other side of the transaction and reduce not only fraud costs but also customer experience impacts.

**Nicky Goulimis**  
Co-Founder  
Tunic Pay

# Startup Interview



**Alexandre David**  
Co-founder & CEO  
Heptalytics

## **1. How serious is the problem of payment fraud in today's financial landscape?**

Payment fraud has become a real business, with organized gangs using professional methods involving AI, developers, and call centers.

## **2. Why are traditional rules engines no longer sufficient in combating payment fraud?**

Traditional rules engines are limited in their effectiveness in countering this increasingly complex engineering. This is why Heptalytics developed an AI-powered payment fraud fighter and AML/CFT assistant.

## **3. How does Heptalytics' solution improve the detection and management of fraudulent activities?**

Heptalytics accelerates operational decision-making by detecting suspected cases of fraud, money laundering, and terrorist financing while producing a situation report. Thanks to the latest deep-learning techniques, Heptalytics analyzes the bank account within its financial and digital relationships network.

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## Startup Highlight

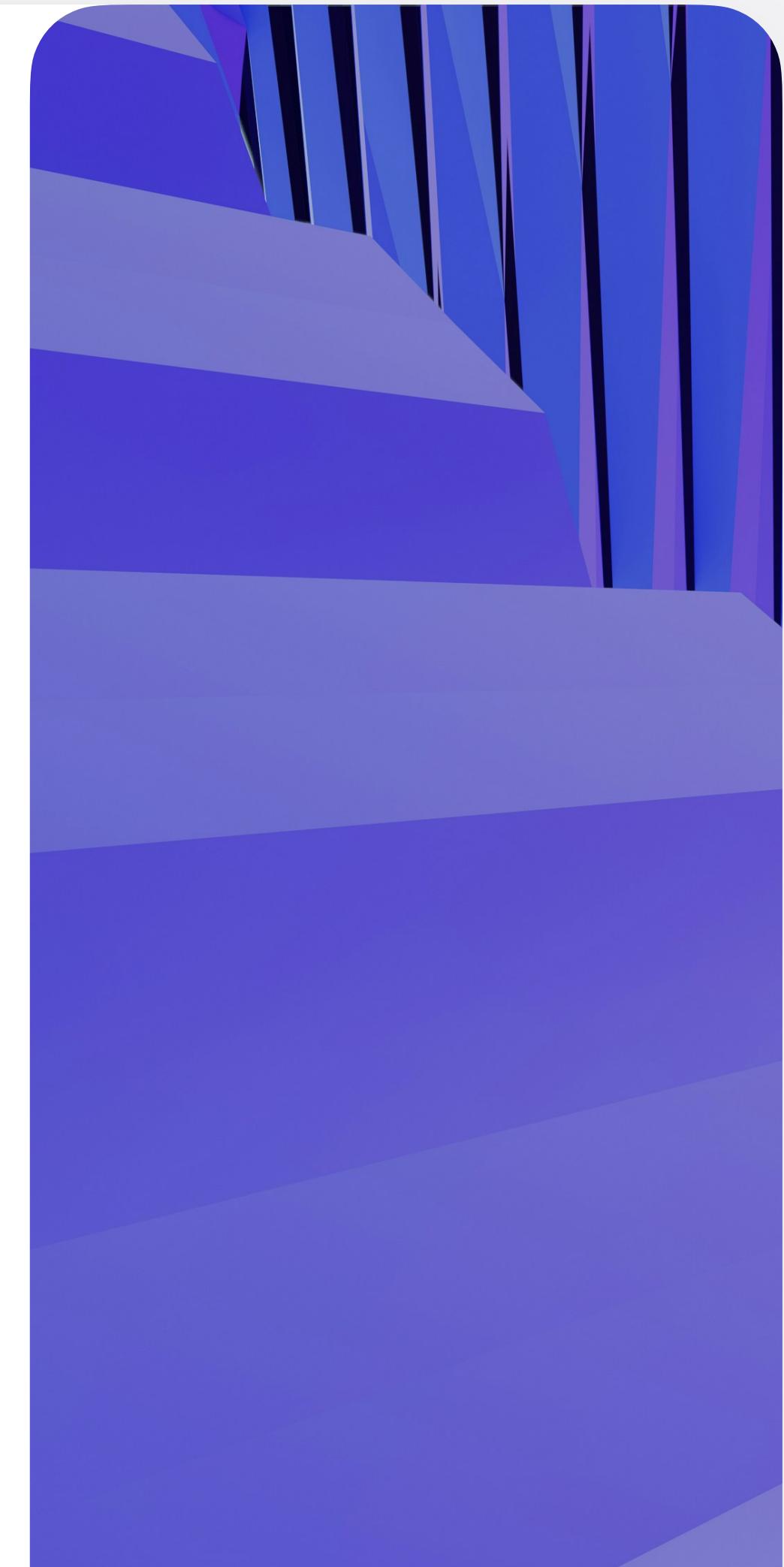


Heptalytics leverages artificial intelligence to enhance payment security and combat fraud. Its algorithms detect weak signals to identify fraudulent behavior while minimizing false positives. It provides real-time predictive alerts and decision-support tools to operational teams, helping them prioritize and manage risk profiles efficiently.

tunic

PAY

Tunic Pay provides a global payment protection and intelligence layer, offering consumers and financial institutions insight and control over payment execution, aiming to combat the growing issue of scams in real-time payments.



## Trend 5 — Real-time, A2A Payments and Open Banking

### Quote



**Daria Gneusheva**  
Investment Manager  
Project A

**“Global interoperability of local payment networks is still a big challenge. Asian markets pioneered early “linkage” models, stitching together local real-time payment rails, for example, between Singaporean PayNow and Thai PropmtPay. In the ideal future, all cross-border payments are instant and can be orchestrated through a single interface. We have started seeing more companies building this infrastructure layer by linking together RTPs or enabling faster transactions via stablecoins.”**

## Trend 5 — Real-time, A2A Payments and Open Banking

### Introduction

There is a demand for faster and more efficient ways to transfer funds, enabling immediate and secure transactions between bank accounts without intermediaries or delays.

Account-to-account payment (A2A) allows the direct transfer of funds from one bank account to another without the involvement of third parties like credit card networks or payment processors. This payment method has existed for a while, long before the rise of digital wallets and modern payment apps. Traditional methods like bank transfers, wire transfers, and Automated Clearing House (ACH) transactions are examples and have been used by businesses and individuals for decades to move money efficiently and securely.

Now, A2A payments are going towards real-time payments, which are processed immediately, unlike traditional A2A methods. This brings a lot of value as they need ways to reduce costs, optimize cash, simplify processes, and help businesses convert more clients through a better overall customer experience. This value is reflected by an increase in usage, which is estimated to come in the next couple of years. According to a report by ACI Worldwide and Global Data, Global real-time payment transactions in 2023 reached \$266.2B with a year-over-year growth of 42.2%. This represents a 19.1% share of total electronic

transactions worldwide.

An excellent example of how instant payment takes the payment landscape by storm is PIX in Brazil, which was introduced in 2020 by Banco Central do Brasil (BCB). Pix is a rapid payment scheme enabling individuals, businesses, and government entities to conduct swift transactions, even on weekends and holidays. Pix facilitates fund transfers between various accounts, including demand, savings, and prepaid payment accounts, reducing acceptance costs by minimizing intermediary involvement.

Nowadays, PIX has become the primary reference for instant payment solutions not only in Latin America but also across the globe. In just three years, PIX has rapidly transformed Brazil into the world's second-largest real-time payments market, trailing only behind India's UPI. This success is attributed to central bank regulations and a vibrant fintech ecosystem, leading to the popularity of no-fee peer-to-peer payments. PIX is also addressing real-time fraud and aims to enhance user experience for in-store use and expand services on its platform.

Brazil now accounts for 75% of Latin America's real-time payments and 14% of global instant payments by transaction volume. PIX facilitates instant, 24/7 account-to-account payments through various methods and is supported by 800 licensed financial institutions.<sup>23</sup>

<sup>23</sup> ACI Worldwide, 2024: <https://www.aciworldwide.com/prime-time-for-real-time-report>

# Trend 5 — Real-time, A2A Payments and Open Banking

## Key Components

### 1. Speed, Efficiency, and Availability

Instant payments significantly enhance transaction speed. They enable funds to be transferred within seconds, regardless of the time or day. This feature addresses the delays commonly associated with traditional bank transfers, which are often processed in batches and exclude nights and weekends. This efficiency is super important for both consumers and businesses as it allows immediate access to funds and improves cash flow management.<sup>24</sup>

### 2. Security

Instant payment systems incorporate advanced encryption and authentication methods to secure transactions. These security features surpass those of traditional payment methods. They help reduce the risk of fraud and enhance trust among users. This superior security framework is essential for protecting financial transactions from unauthorized access and fraud.<sup>25</sup>

### 3. Convenience

Instant payments simplify the transaction process for consumers, businesses, and financial institutions.

- **For Consumers** — This is accomplished primarily through the quick settlement of bills and peer-to-peer transfers. This immediacy eliminates the waiting period associated with traditional banking, making it easier to manage finances effectively. Moreover, real-time balance updates enhance financial control and planning, giving consumers an up-to-date view of their economic status.
- **For Businesses** — Instant payments translate to reduced fees, accelerated cash flow, and immediate access to capital. This rapid access to funds is crucial for maintaining liquidity and meeting operational needs without delay. Additionally, businesses can improve customer satisfaction by offering faster refunds and payments, which enhances the overall customer experience and promotes loyalty.
- **For FIs** — Financial institutions benefit from instant payments through new revenue streams generated by offering instant payment services. These services attract more customers seeking convenience and efficiency in their transactions. Furthermore, increased customer engagement and retention can be achieved as financial institutions provide more value-added services, which clients demand at this point.

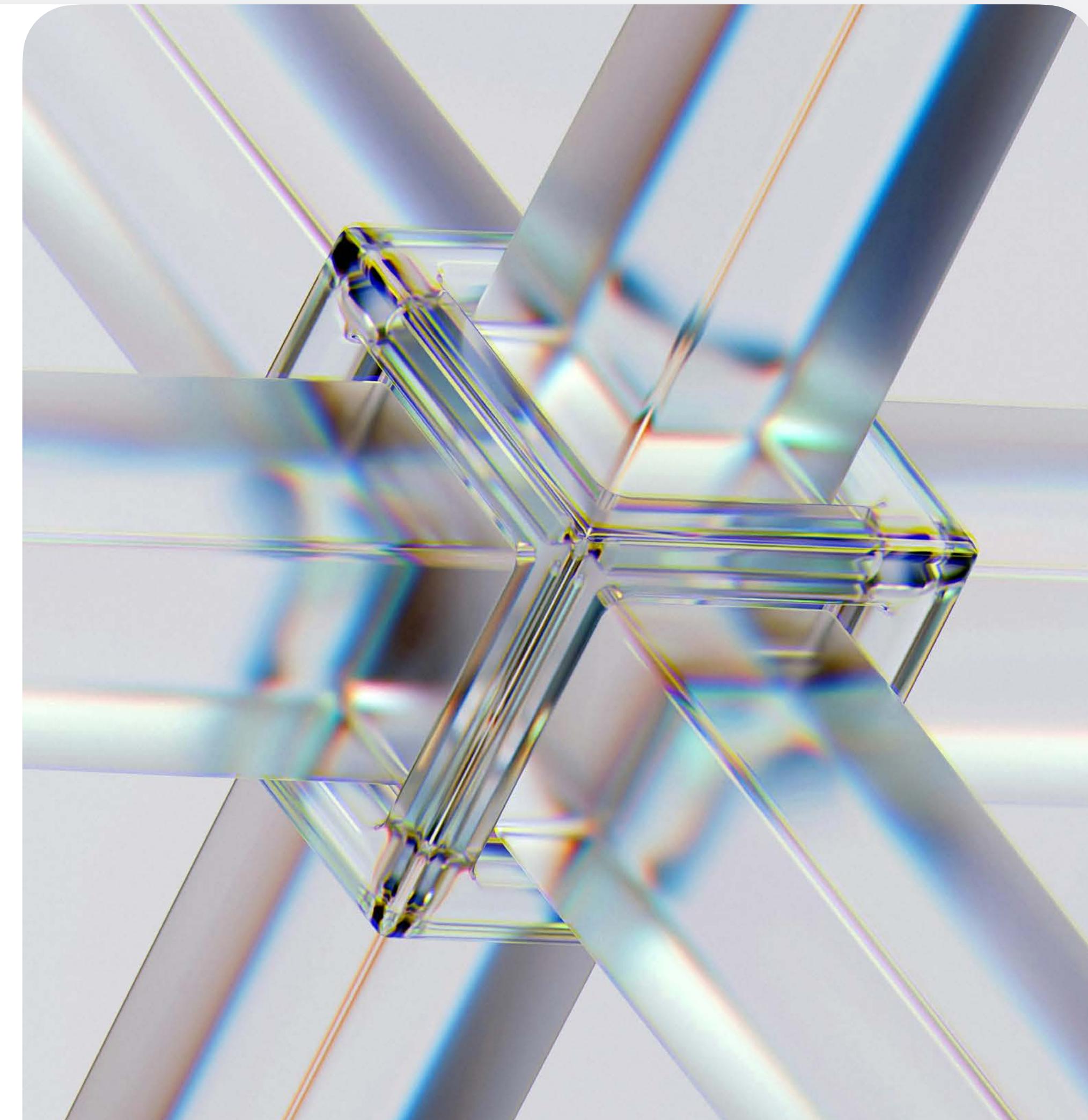
<sup>24</sup> Monei, 2023: <https://monei.com/blog/instant-payment/>

<sup>25</sup> Peachwire, 2024: <https://www.peachwire.com/instant-payments-offer-a-potential-efficiency-boost/>

## Trend 5 — Real-time, A2A Payments and Open Banking

### The Role of Open Banking

Open banking enables secure financial data sharing between banks and third-party providers through APIs. This technology facilitates the seamless integration of instant payments into apps and websites. It allows users to make payments directly from their bank accounts without manual data entry or redirection to separate banking portals. This streamlined process reduces friction, enhances user experience, makes transactions faster and more convenient, and improves checkout by reducing cart abandonment rates.



# Startup Interview



**Max Wolke**  
Head of DACH  
Brite Payments

## **1. Why are instant payments necessary today, and how are fintech companies like Brite changing the landscape?**

Instant payments are long overdue. Due to the organic growth of payments, lots of intermediaries or 'middlemen' have been taking a cut as money moves from A to B. But this is about to change as fintechs like Brite enable online merchants and insurance companies to accept payments directly from a customer's bank account and make payouts in real-time.

## **2. What are the benefits and potential applications of instant payments?**

The benefits are substantial: near-to-zero fraud risk with instant settlement, a slick customer experience, and reduced payment processing costs. Moreover, there are hundreds of use cases in which instant payments can improve, and so far, we are only scratching the surface.

## Startup Highlight

### Brite\*

Brite Payments offers a fast, secure, and easy payment system without needing cards, apps, or sign-ups. Users simply choose to pay directly from their bank account. It supports instant payments and payouts across Europe, connecting over 3800 banks.



Ivy Payments offers a solution that allows businesses to slash payment fees by enabling direct bank payments, eliminating the need for credit card schemes. Their technology connects to over 300 million US bank accounts, ensuring bank-level security with features like biometrics and 2FA.

### Banked :

The fintech company provides an account-to-account payment software platform that virtually eliminates fraud as there is no need to create an account, zero financial details are shared, and payment authorizations are biometric. At the time of purchase, they choose their existing bank and are then taken directly to their mobile banking app to authenticate the transaction biometrically.

### Link Money

Link customers pay by bank transfer, sending funds directly from their bank to a merchant's business account. Link guarantees the funds, taking on customers' credit risk — an AI model tries to identify potentially fraudulent or risky transactions before they're processed ([source](#)).



## Trend 6 — Crypto Quote



**Clarisse Lam**  
Investment Manager  
New Alpha

**"Some key tech trends in payments I have been looking out for are payment fraud and cross-border payments. Payment fraud has always been a significant issue for financial institutions, but as payments become increasingly digital and instant, and with the prevalence of GenAI, it is an even more pressing challenge for banks and businesses today.**

**I am also excited by the rise of digital currencies-stablecoins are being more widely adopted as a way to settle cross-border transactions faster and cheaper. As regulators and CBDCs progress, I think we'll see more adoption and innovation in the space."**

## Trend 6 — Fraud & Security Measures

Spencer Swanson, Ventures Associate for Plug and Play's Crypto & Digital Assets vertical provides the following trend.

### Introduction

The Web3 industry has risen admirably from the ashes of the crypto winter, with 2024, in particular, marking a seminal year for institutions' adoption of blockchain technologies. Notable developments include the tokenization of RWAs CBDCs, the SEC's recent approval of spot BTC/ETH ETFs, the continued growth of stablecoins, and increased VC funding to the DeFi/Infrastructure sectors. The space has turned a new page after the compounding calamities of 2022, in which a variety of foundational blockchain companies collapsed, most notably the crash of the fraudulent cryptocurrency exchange FTX (along with its affiliates such as Alameda Research, Voyager Digital, and BlockFi), the depegging of algorithmic stablecoin Terra Luna, the implosion of digital asset hedge fund Three Arrow Capital and the infamous Chapter 11 bankruptcy of crypto collateralized lender Celsius Network.

Though millions of people now own crypto in one form or another, crypto-based activity has failed to gain meaningful traction outside of a trading context. Crypto does, however, seem to be approaching an inflection point. Infrastructure advances are making crypto networks

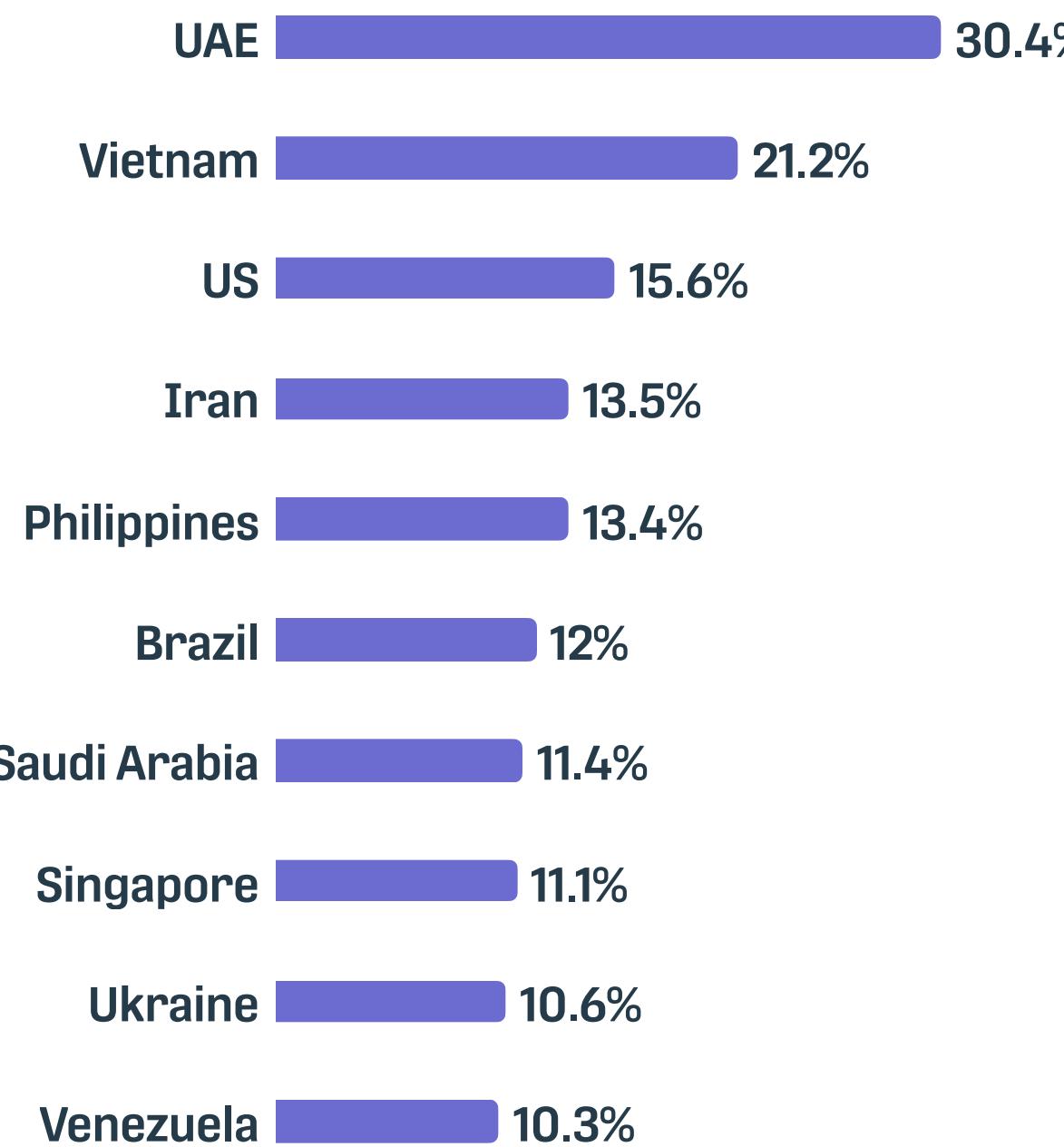
faster and lowering transaction fees, allowing for cheaper payment vehicles and broader public appeal. In fact, Crypto payments are predicted to grow at a compound annual growth rate (CAGR) of nearly 17% between 2023 and 2030 (Statista). Various factors, including increasing consumer interest, technological advancements, and broader acceptance of cryptocurrencies, drive this.

Both merchants and consumers have grown more knowledgeable about crypto and are more confident using it as a payment method. Global surveys indicate a high level of awareness about cryptocurrencies, with 92% of respondents out of a survey of 15,000 people in 15 countries across all continents stating they "have heard about them" (Consensys 2023). Furthermore, a survey by Arlington Research for Kaspersky revealed that almost half of respondents (44%) believe that crypto payments will become a common choice for online shopping. Nearly 1 in 4 people would buy their groceries with crypto, 81% of gamers would use it to pay for game-related purchases, and 36% would use crypto to pay for dining and entertainment tickets. Furthermore, 68% of surveyed people stated they want more opportunities to use crypto for payments, from video games (59%) to groceries (39%) to cars (32%). This shows that more people are open to using crypto for everyday purchases, signaling a possibility for merchants.

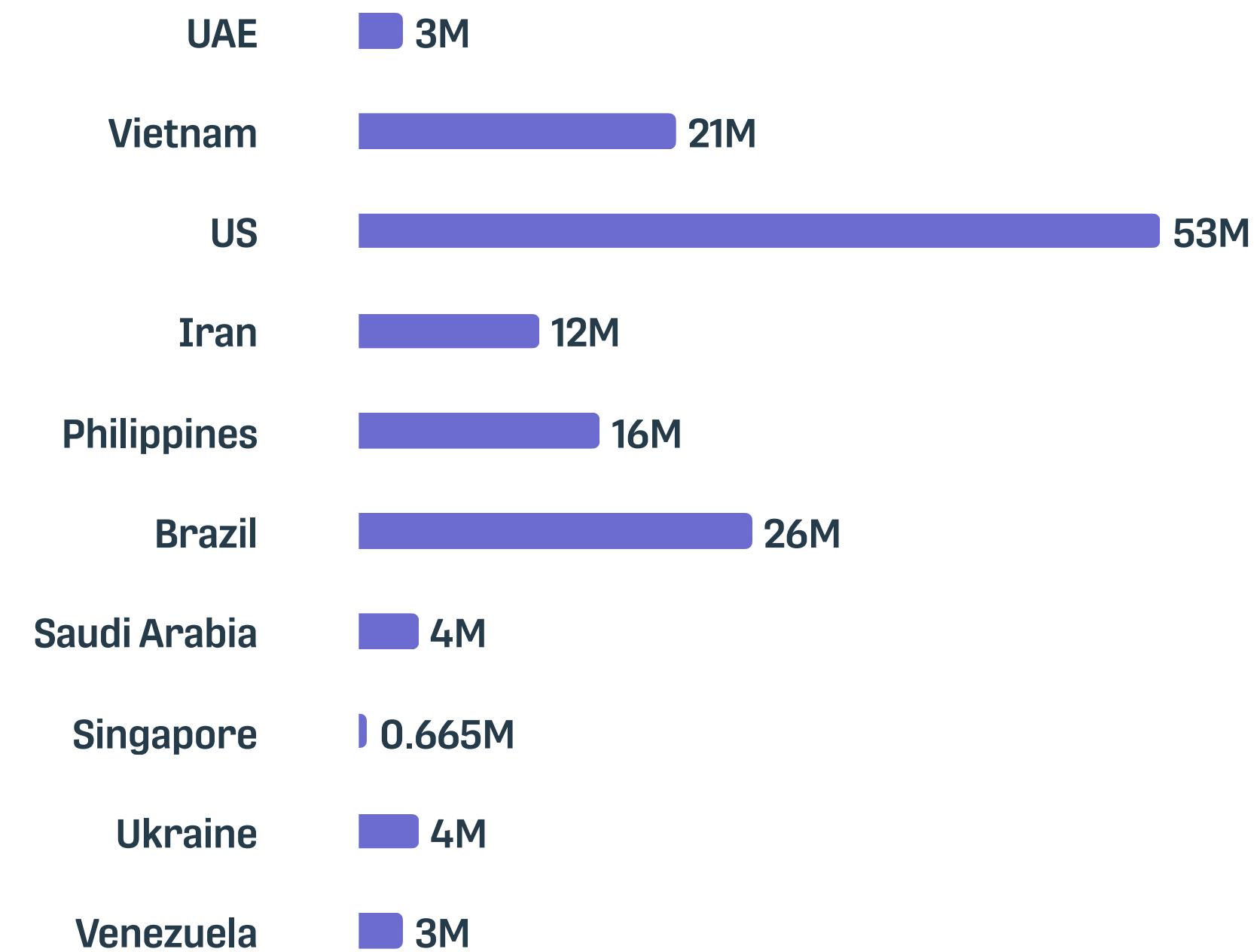
## Trend 6 — Fraud & Security Measures

An international breakdown of crypto adoption is shown below:

### Percentage of Population Owning Crypto



### Number of Crypto Owners



## Trend 6 — Fraud & Security Measures

Although the acceptance of crypto is growing, adoption as an everyday payment method is still not mainstream. **Major obstacles include:**

- **Volatility** can deter both merchants and customers. Crypto payment gateways, however, can automatically convert crypto into fiat like EUR during a purchase, mitigating volatility risk and ensuring that the merchant receives the exact invoiced amount in EUR and the customer is able to pay with the desired crypto.
- **Lack of Regulatory Clarity** in many regions makes businesses anxious. That said, the introduction of new regulations like the Markets in Crypto Assets (MiCA) in the EU is helping to clarify legal ambiguities, making it easier for more businesses to integrate crypto payments.
- **Inherent Technical Complexity** intimidates many potential users because integrating crypto payments may seem complex and time-consuming. Solutions like SwapinCollect simplify the process, allowing merchants to start invoicing customers within one business day.

▪ **Concerns About Security** are also widespread. In 2022, cryptocurrency hacks resulted in \$3.7 billion stolen from users (Chainanalysis). While this figure decreased by 54.3% in 2023 to \$1.7 billion, the threat persists as hackers are developing new ways to exploit exchanges and wallets. This means that Crypto payment providers must invest in robust security measures to protect against breaches, and merchants must ensure they partner with licensed and security-focused providers.

## Trend 6 — Fraud & Security Measures

Nevertheless, the crypto payments industry is evolving, with more crypto-friendly businesses and eager consumers emerging.

**The benefits of crypto payments are significant:**

- Crypto payments often **reduce transaction costs** significantly when compared to traditional payment methods. Most cryptocurrency payment processors charge around 1-2% fees versus up to 3.5% for credit card payments.
- Blockchain transactions can be **processed almost instantaneously**, which is especially beneficial for international transactions that typically take several days through traditional banking systems.
- Accepting cryptocurrencies can **attract a new segment of customers** who prefer to use digital currencies, expanding a business's reach and boosting growth.

As cryptocurrencies gain more acceptance as a payment method, being an early adopter may provide **a competitive edge** and position you as an innovative brand.



## Trend 6 — Crypto Quote



**Alexandre Roubaud**  
Co-Founder & CEO  
Bitstack

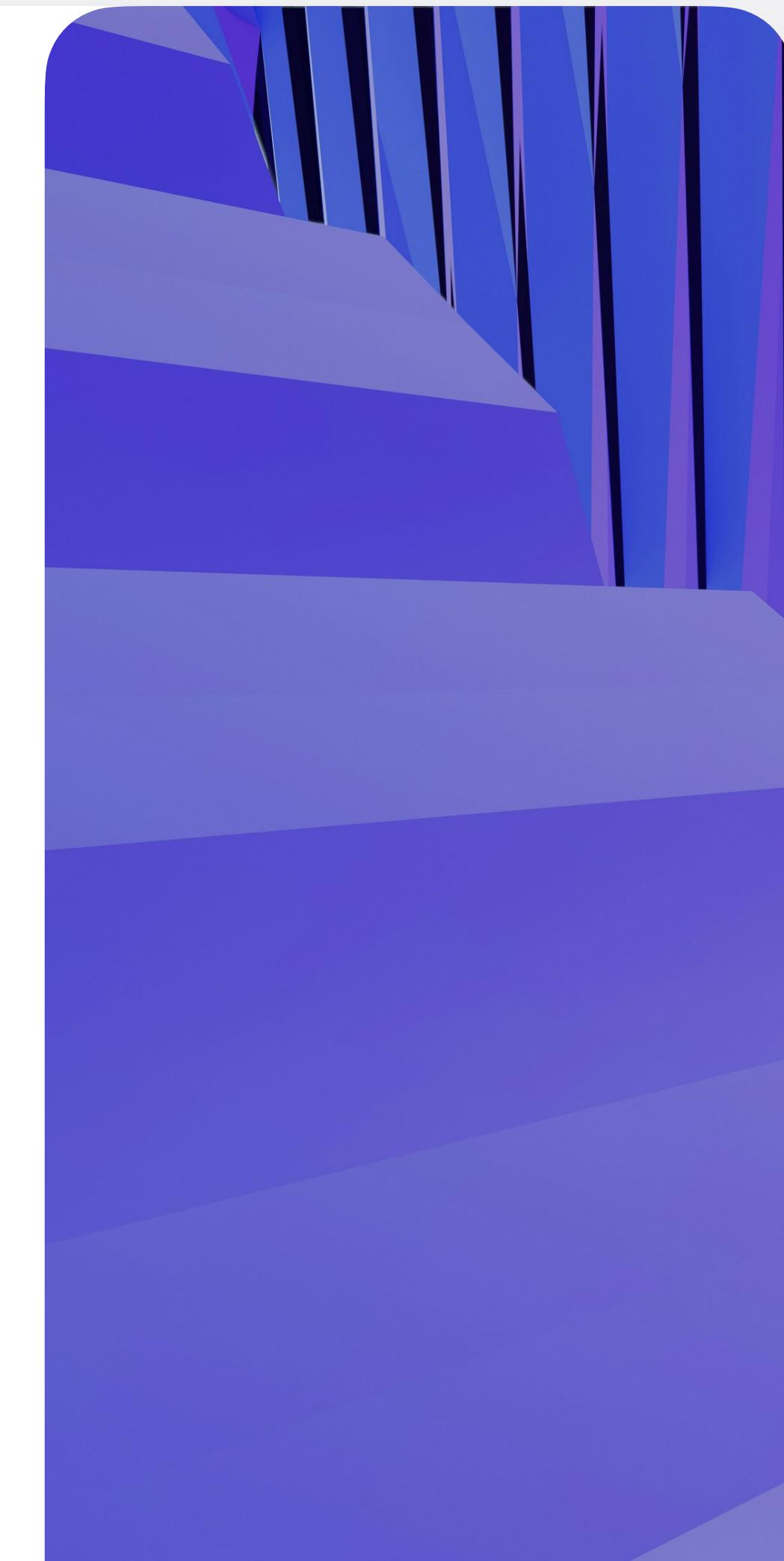
**“Bitcoin is the first open, global, and permissionless payment network that allows users to send and receive money almost instantaneously and with minimal fees. Bitstack is building the infrastructure required to develop innovative financial products powered by Bitcoin, enabling cheaper and faster payments. Our enterprise partners can integrate full-suite Bitcoin products tailored to their needs with everything covered — brokerage, settlement, custody, pan-European licenses, and fully automated operations processes.”**

JOIN THE PLATFORM  
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## Startup Highlight



Bitstack allows users to effortlessly save and invest in Bitcoin by rounding up everyday purchases to the nearest euro and automatically investing the spare change into Bitcoin. The app offers secure, automatic savings and investment features, making Bitcoin accessible to everyone.



# Startup Interview



**Carla Puel**  
VC Investor  
Lead Blocker Partners

## **1. What are some key tech trends in crypto payment to look out for? What are you the most excited about in the space?**

Payment fraud has become a real business, with organized gangs using professional methods involving AI, developers, and call centers. The crypto payment landscape is undergoing a period of significant technological innovation. Key trends to watch include further advancements in cross-border payments and enhancements in the setup of stablecoins. Projects like Agora and Usual have recently been launched, aiming to solve the issues of the current market (centralization, opacity, and third-party dependencies) and further integrate stablecoins in our traditional economies. As part of the movement towards making crypto payments more accessible, crypto credit card availability has increased, such as those offered by Gnosis Pay, Bitpanda, and other providers.

Additionally, improved cross-chain interoperability will break down the silos between blockchains, allowing for seamless movement of funds across diverse ecosystems. The development of more mass-market applications, bringing and retaining more users into the ecosystem, will also significantly enhance the versatility of crypto payments.

Finally, as financial and corporate groups further expand into this ecosystem, the development of privacy-enhancing technologies, like zero-knowledge proofs used by Matter Labs with its Layer 2 ZKSync is crucial. By empowering users with greater control over their financial data, these advancements will foster trust and broader acceptance of crypto payments within the mainstream.

## **2. What excites me most**

While all these trends are significant, I'm most enthusiastic about the overall enhancement of the on-chain user experience, which would result in further crypto adoption. Imagine a future where you can use crypto for everyday purchases as quickly as swiping a card, with the added benefit of solid privacy protections. This would be a game-changer for financial inclusion and user control.

# Startup Interview



**Carla Puel**  
VC Investor  
Lead Blocker Partners

## 3. What are some evolutions and innovations needed in the space?

The crypto payments industry, despite its potential, requires advancements in several key areas. First, a smoother and more user-friendly experience is essential. This includes simplifying wallet interfaces, streamlining onboarding processes, and offering easy ways to convert between fiat and crypto for everyday purchases. Security is another crucial aspect. Advancements in multi-factor authentication, secure hardware wallets, and robust fraud detection systems are paramount to building user trust.

Wider adoption also hinges on seamless integration with existing financial systems. This requires clear regulatory frameworks, smooth communication between traditional payment networks and blockchains, and collaboration between crypto companies and established financial institutions. Finally, the focus shouldn't solely be on replacing traditional payments. We are still lacking hybrid solutions to bridge both worlds and enable 'pure' crypto payments in the conventional world. Exploring innovative use cases that leverage the unique advantages of blockchain technology, like micropayments for content creators, decentralized escrow services, and streamlined international remittances will unlock the true potential of crypto payments.

# Credit

## Internal

Salim Laouiti, Ventures Associate, Plug and Play  
Zoe Chrysostom, Ventures Associate, Plug and Play  
Carolin Wais, Partner EMEA, Plug and Play  
Spencer Swanson, Ventures Associate, Plug and Play

## External (VCs + Startups)

Maria Marti Garcia, Co-founder at Five  
Damien Launoy, Managing Director at 115K (CVC of La Banque Postale)  
Vassilina Lapteva Walford, Founder at Payment Vibes  
Rob Zeko, Co-Founder & CEO at Quidkey  
Rafik Shamsudin, VC Investor at Start Ventures  
Nicky Goulimis, Co-Founder at TunicPay  
Alexandre David, Co-founder & CEO at Heptalytics  
Daria Gneusheva, Investment Manager at Project A  
Max Wolke, Head of DACH at Brite Payments  
Clarisse Lam, Investment Manager, New Alpha Asset Management  
Alexandre Roubaud, Co-founder & CEO at Bit stack  
Clara Puel, VC Investor at Lead Blocker Partners

