

zensar

# Embedded Payments

Offering a Human-centric  
Experience to Customers



An  RPG Company

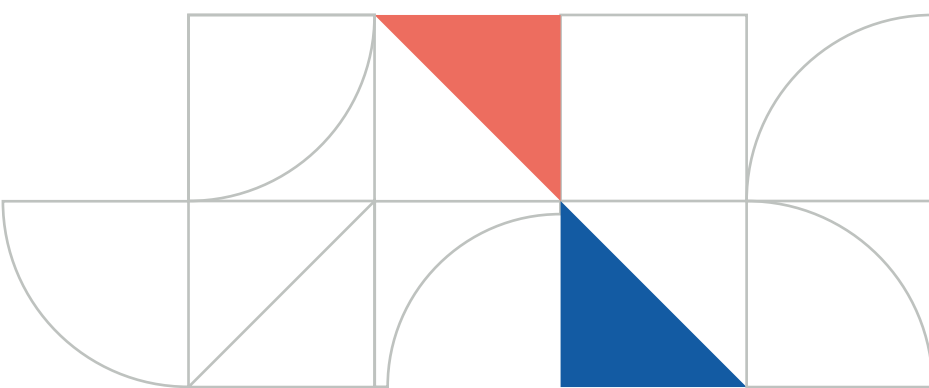
Today's new-age world is fast-moving and demands that all services are in real-time. This includes a seamless experience for any payment-related activity across any transaction, whether hailing a cab or purchasing groceries. In the absence of such an experience, customers will likely move to merchants who are providing the same. In a world where experience is everything, financial institutions are rapidly embracing [Embedded Payments \(EP\)](#) — the provision to seamlessly make a simple one-click/one-touch payment over a digital platform — for the ultimate human-centric experience and customer satisfaction. EPs may have emerged recently but are quickly becoming ubiquitous. Embedded Payments are a subset of the larger universe of Embedded Finance (EF). In our previous paper, we explored how embedded finance is changing the future of [financial services](#). In this paper, we take a deep dive into the Embedded Payments phenomenon. From entities and operations flow to the API-drive integration ecosystem, we explore the facets that enable EP transactions. We also examine why merchants across industries must adopt embedded payments to drive sales, stay relevant, and, most importantly, offer a seamless customer experience.

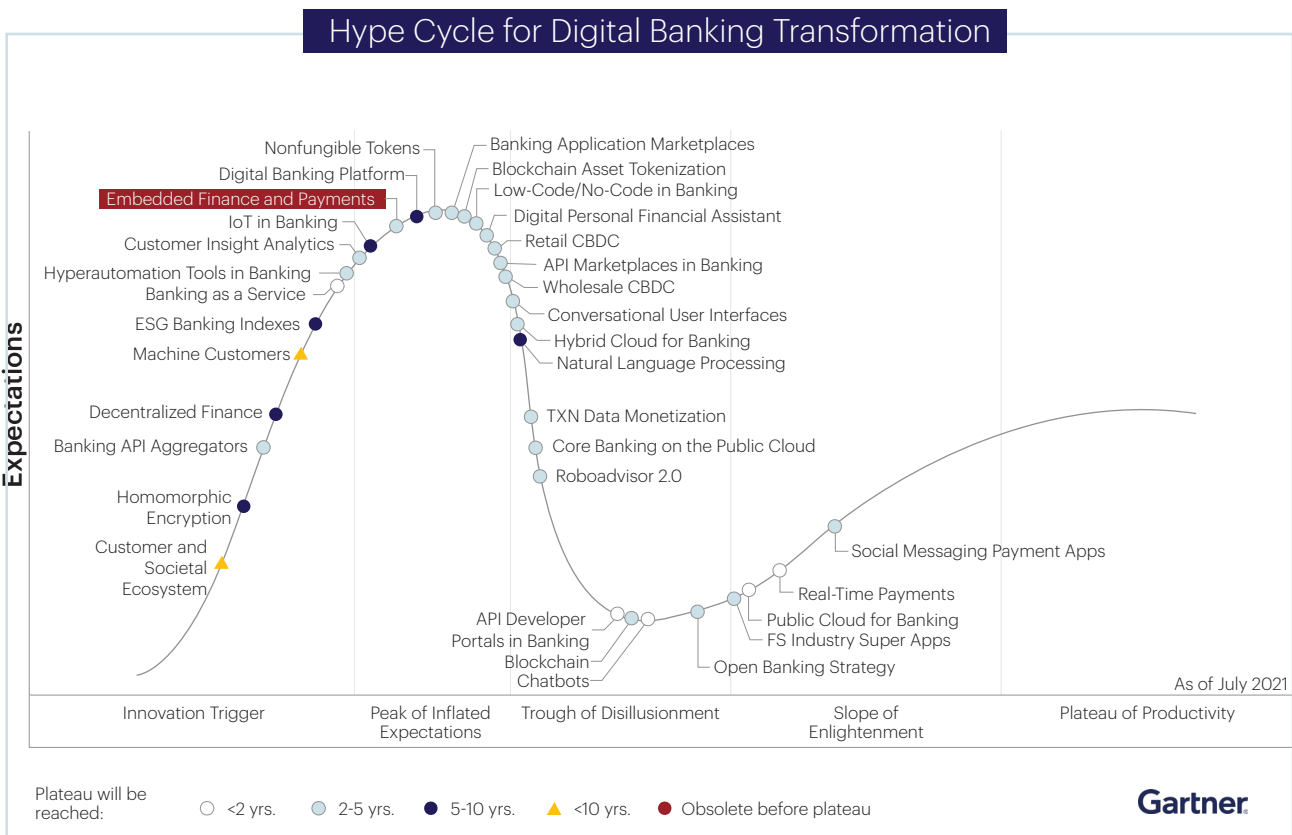
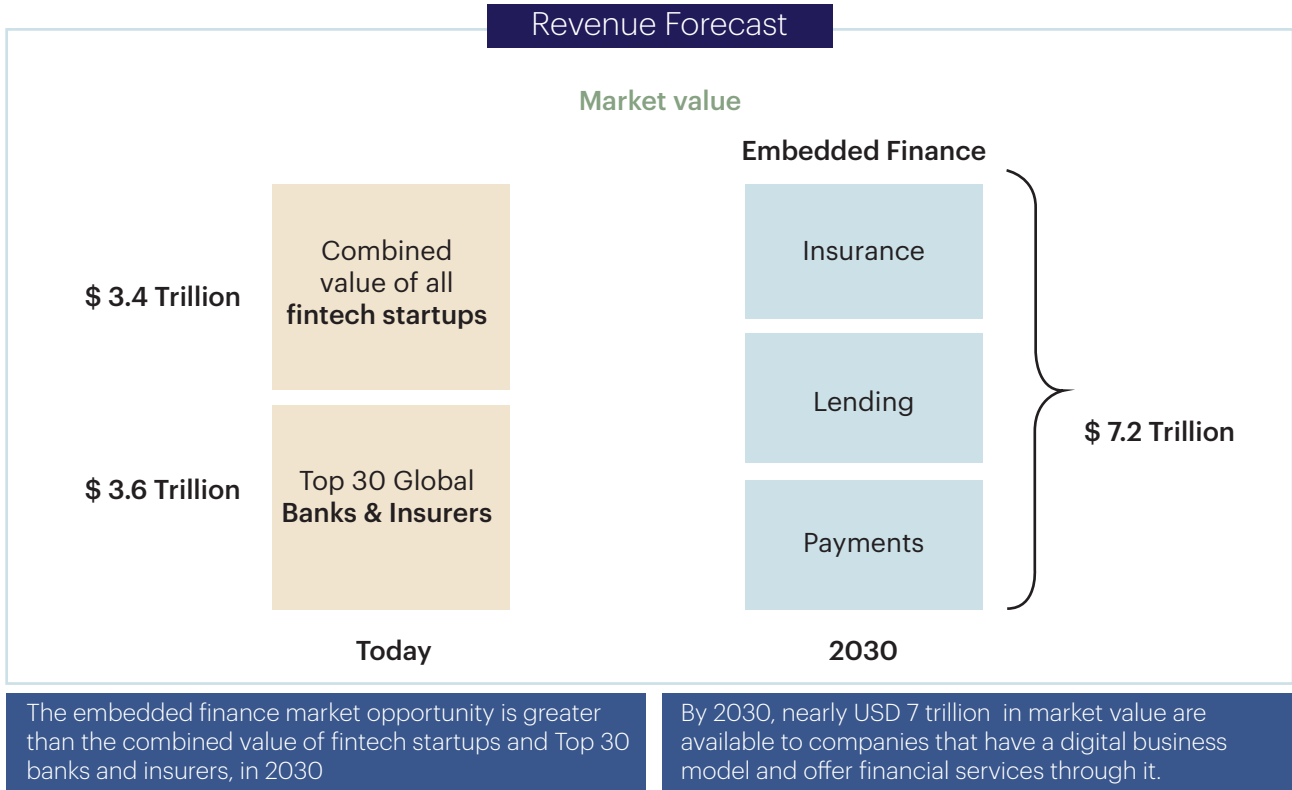
Embedded Payments are distinguished by the fact that they enable a payment option in an app used by a non-finance merchant. When EP is used, the payment is made by users from within the app using a

mechanism like a QR code or a text message. The user does not leave the app to make the payment.

There are several benefits of using EPs for merchants and customers. First, the merchant owns the entire shopping journey, including the transaction experience. This means the merchant has greater control over the end customer experience and can increase engagement with the customer. Second, from a customer perspective, EPs offer a human-centric user experience with more granular control over payments. Third, for the merchant, they offer real-time settlements (unlike credit cards) with instant debit and credit confirmation of transactions. Some classic examples of EPs are food delivery apps like Zomato, Foodpanda, and Deliveroo and ride-hailing apps like Uber, Ola, and Lyft. Zelle and Stripe are examples of using EP for peer-to-peer transactions. Square is an example of a fintech that lets merchants embed payments into their applications. It is also an example of how EP is the starting point for expanding into broader financial services such as BNPL, loans, and insurance under the EF umbrella.

Consumers have adopted the idea quickly. The market for EPs is growing. By 2030, nearly \$7 trillion in market value will be available to companies with a digital business model that offers financial services. Gartner expects EP to mature in the next two to five years (see Figure 1)





Embedded payments is at the heart of Digital transformations in payments expected to mature in the next 2 to 5 years driving a shift across industries.

Figure 1: Embedded Payments forecast: The market is ripe for opportunities

# Why are Embedded Payments important?

Two factors have contributed to the rising use of EPs. The simple user interfaces have made it easy to embrace EP. Usually, a scan of a QR code with a mobile phone followed by a tap or a swipe completes the payment. The EP process is safe and simple, making additional logins into banking apps redundant. It also offers a genuinely integrated human-centric experience. The pandemic fueled this trend as customers wanted touchless payment and chose online shopping. Keeping customer needs in mind, retailers partnered with banks and FinTechs to offer solutions such as BNPL at checkout. The ease of use lets customers buy more products resulting in higher sales and reduced cart abandonment rates.

EPs are gaining rapid traction thanks to fintech's offering services via APIs, allowing enterprises to pick, choose, and combine services from different providers and deliver them to their end customers.

In the coming months, EPs will find their way into industries as diverse as gaming, hi-tech, manufacturing, retail auction, government, and healthcare (see Figure 2). These industries will open new opportunities for banks and financial service providers to add to their revenue streams.

## E-commerce

Multiple payment checkouts options through **payment gateways, credit cards, micro-loaning apps, e-wallets**

## Gaming

**In-game purchases** in video games such as Sony, Microsoft, Nintendo etc.

## Hi-Tech

**Subscription based pricing for SaaS** (eg, McAfee, Windows, Apple, etc.)

## Manufacturing

**B2B Marketplace:**  
International payments in local currency

## Healthcare

Multiple payment options for patients such as **BNPL, insurance sponsored financing** etc.

## Government

**Government payments** such as gst portal, income tax portal, e-marketplace such as mjunction, etc.

## Retail Auction

**Payments at auction market** where buyers enter competitive bids simultaneously

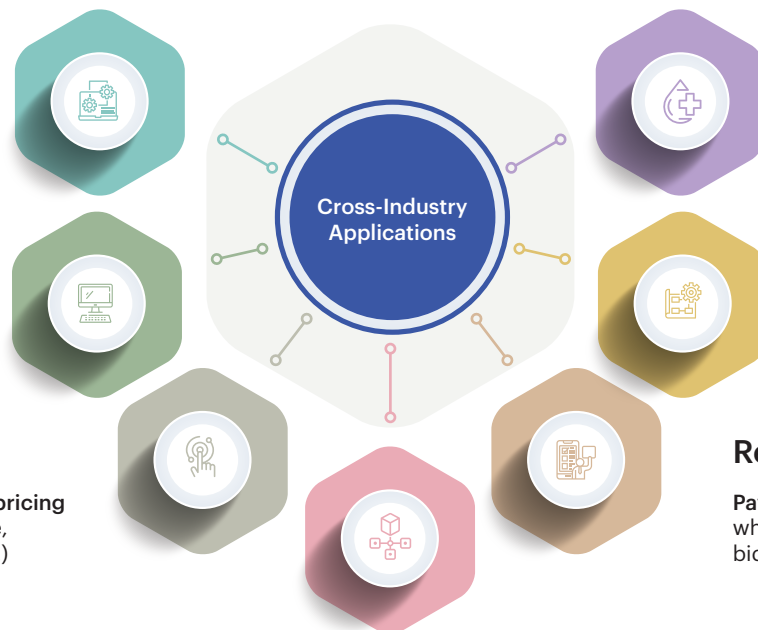


Figure 2: Embedded payments across industries

# Factors shaping the Embedded Payments industry

The Embedded Payments ecosystem consists of four entities, each with its own function: customers, containers, providers, and enablers (see Figure 3).

Within that ecosystem, every merchant and enterprise (containers) using (or planning to use) EPs needs to ask: what are the significant developments likely to influence the payments industry?

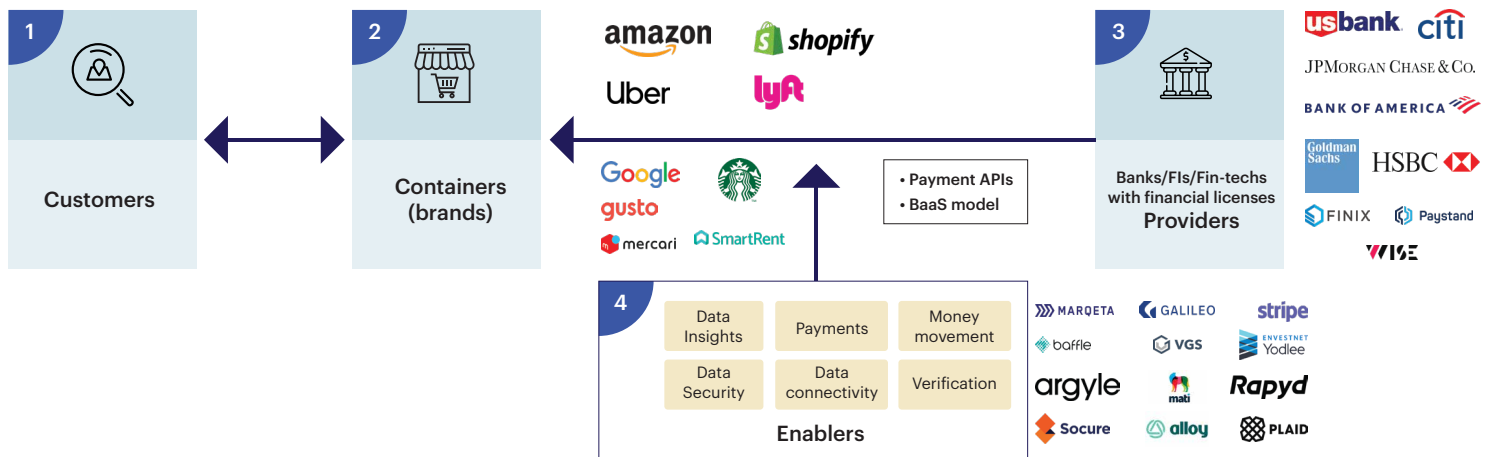
The first significant influence is the abundant availability of plug-and-play APIs via FinTechs (enablers). Merchants and enterprises can cherry-pick the services they want from different providers to shape their offerings.

Second, a boom is on its way in the B2B EP space with the rise of capabilities such as real-time cross-border payments integrated with back-end financial

processes like accounts payable and accounts receivable. This untapped area offers considerable scope for innovation and will see a spurt in interest from FinTechs.

Third, the potential for EP in industries such as education and real estate — traditionally late adopters of technology — will explode, leading to new opportunities in the BFSI industry.

Last, new collaborations between legacy banks (providers), big tech companies, and FinTechs will bloom. Legacy banks will be much sought after for their expertise in managing compliance, while big techs and FinTechs bring their ability to innovate and scale (see Figure 3).



Entity	Functions
1 Customers	End consumers of the brand/merchant
2 Containers	Brands: financial services are embedded in own services for provision to customers. It can be standalone site or a network where the payments solution is embedded and is accessible
3 Providers	Providers of financial functions: holders of financial licenses & creator of financial services and products. E.g. Banks / FIs / Fin-techs with financial licenses
4 Enablers	Acts as a pipeline between brands & providers to enable exchange of services, data, and information. They are usually fin-tech companies that offer payment solutions tailored to the containers/brands requirements

Figure 3: The key entities in the Embedded Payments ecosystem

# Transaction flow across the EP ecosystem

The emerging payments landscape demands expertise that neither merchants nor traditional bankers possess. This includes the design and integration of several physical and virtual technologies, processes that ensure the stickiness of the payment platform, ease of use, security, etc. By integrating non-banking services with regulated financial services, the entire ecosystem can benefit from banking licenses, products, platforms, operations, existing relationships, and innovations that come together under the umbrella of Banking as a Service (BaaS). The incentive for merchants,

non-banking FinTechs, and traditional banks to collaborate is significant: users can interact with the brands of their choice without worrying about security. Additionally, money changes hands between fewer entities, lowering the cost of transactions.

At Zensar, our point of view on what a typical transaction flow across the ecosystem (customers, containers, providers, and enablers), catering to credit cards, debit cards, and app-based payments, should look like, is shown in Figure 4.

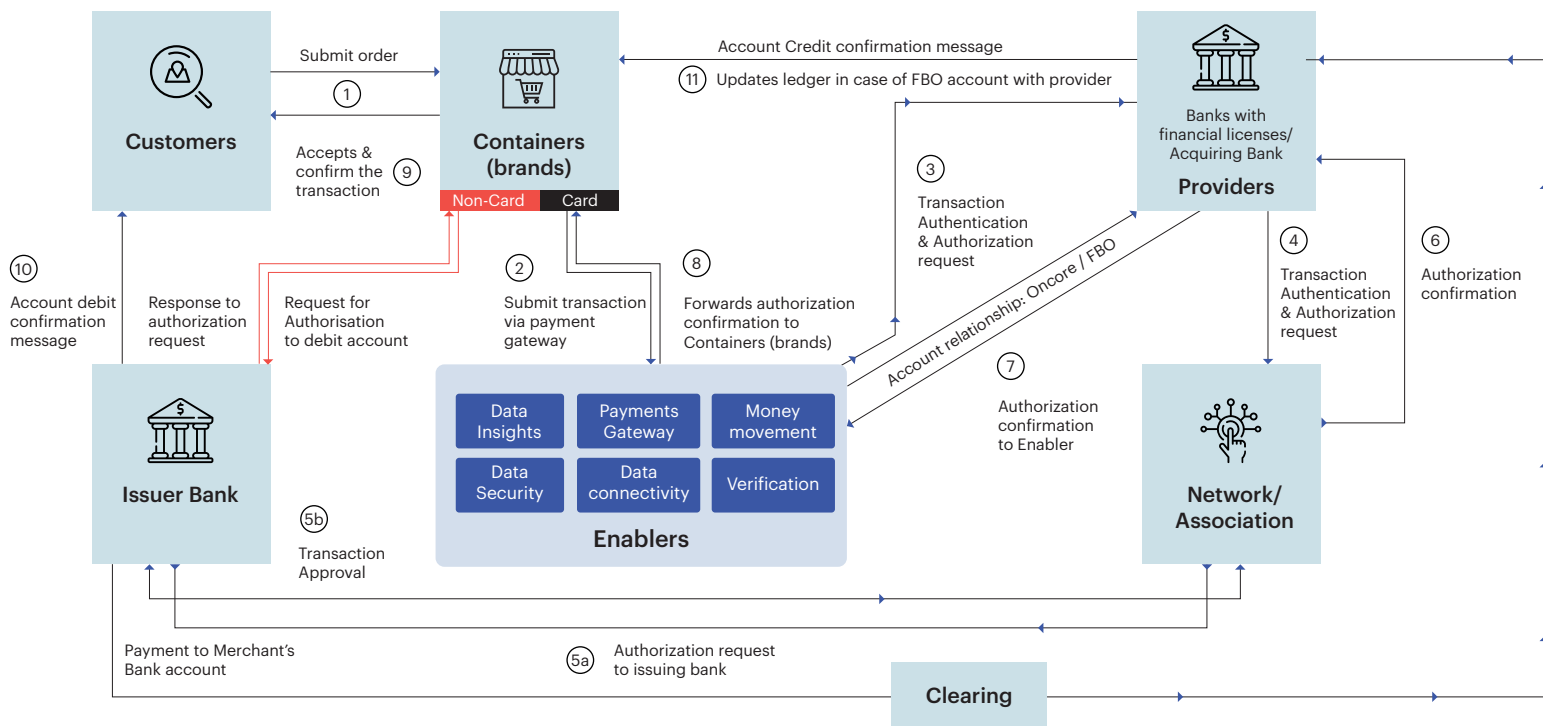


Figure 4: A detailed transaction flow for Embedded Payments as per Zensar’s point-of-view

# Embedded Payments account types and associated risks

There are two types of accounts — On-core and For the benefit of (FBO) accounts —available to FinTechs (enablers) for EPs through their banking partners.

On-core accounts are opened directly in the containers (brands) name at the bank. Individual accounts are opened for every container, and KYC information has to be provided for all containers. For example, accounts are opened for the merchants directly with the bank instead of a BaaS provider.

FBO accounts are umbrella accounts that pool funds for the benefit of containers (brands) without the

FinTech assuming ownership interest in the account (see Table 1 for the benefits and risks of FBO accounts). These accounts require minimal KYC. FinTechs open FBO accounts with a bank and create virtual accounts in their books for the containers. Transactions within individual containers are not reflected in FBO directly. For example, a BaaS provider (e.g., Stripe) will open an account on behalf of the merchant (e.g., Costco), providing a legal way to hold money.

Benefits of FBO accounts	Risks of FBO accounts
Saves businesses/FinTechs the trouble of getting a money services business (MSB) license, a time-consuming process that varies from state to state.	KYC collected during onboarding could be less prescribed than in the pre-defined bank process.
Faster account opening process.	Banks do not have direct visibility to transactions done by end-users (containers) in the books of FinTechs (enablers). Banks rely on support from FinTechs (enablers) to understand and reconcile transactions that flow through the FBO accounts.
No ownership interest in the FBO account.	Poses greater transaction monitoring challenges for a bank.
Source: <a href="https://www.treasuryprime.com/">https://www.treasuryprime.com/</a>	

Table 1: Benefits and risks of FBO accounts

# Mitigating inherent risks associated with FBO accounts

Banks and their regulators perceive FBO accounts to be riskier than on-core accounts. In instances where the account holder may be the FinTech rather than the end-user, there is generally less KYC collected during the onboarding process than in the pre-defined bank process. Secondly, the ledger accounts within an FBO are virtual, and banks do not have direct visibility into these accounts through their ledgering tools and transaction monitoring systems.

Bank partners often rely on support from the FinTechs to understand and view transactions that flow through the FBO accounts.

To mitigate these risks, banks should enable the FinTech partner to open separate FBO accounts, establish adequate KYC for end-users and the FinTech itself, and integrate the relevant transaction monitoring tools.



# Strategizing for change

While the trends in EPs play out their natural course — which they will quickly, given the consumer pull — banks must embrace and innovate around the EP

space. They can quickly unlock new opportunities and innovations if they prepare for change (see Figure 5).

To be a key driver in facilitating product innovations in the payments industry, banks must choose to embrace Embedded Payment solutions within their ecosystem. A multifaceted view to institute and embrace Embedded payments is a must to factor in. Highlighted below are broad constructs banks need to consider to enable Embedded Payments



Figure 5: Suggestive areas of change to adopt Embedded Payments

## The road ahead

As the world becomes increasingly digital and boundaries between the physical and virtual world have begun to merge (metaverse/multiverse/omniverse), the common commercial denominator in all these confluences remains Embedded Payments (both fiat and crypto).

The customers will (rightly) demand/expect seamless payment options at the doorstep of their preferred channel of engagement, while merchants would want real-time payment settlements. These factors have combined to make EP a must, powering its

exponential growth. Simultaneously, the broad API ecosystem and the availability of APIs offer FinTech an opportunity to innovate. Therefore, banks and financial institutions must make Embedded Payments an integral element of their strategic roadmap, create network rails to enable EP across industry ecosystems, ensure proper transaction screening, monitoring, and compliance reporting to prevent cyber fraud, establish merchant and customer relationships (as their end users) to provide a better experience, and, finally, work with FinTechs and technology partners to drive future evolutions.



## Authors

### Ashutosh Sharma

Global Head,  
BFS Industry Solution Group

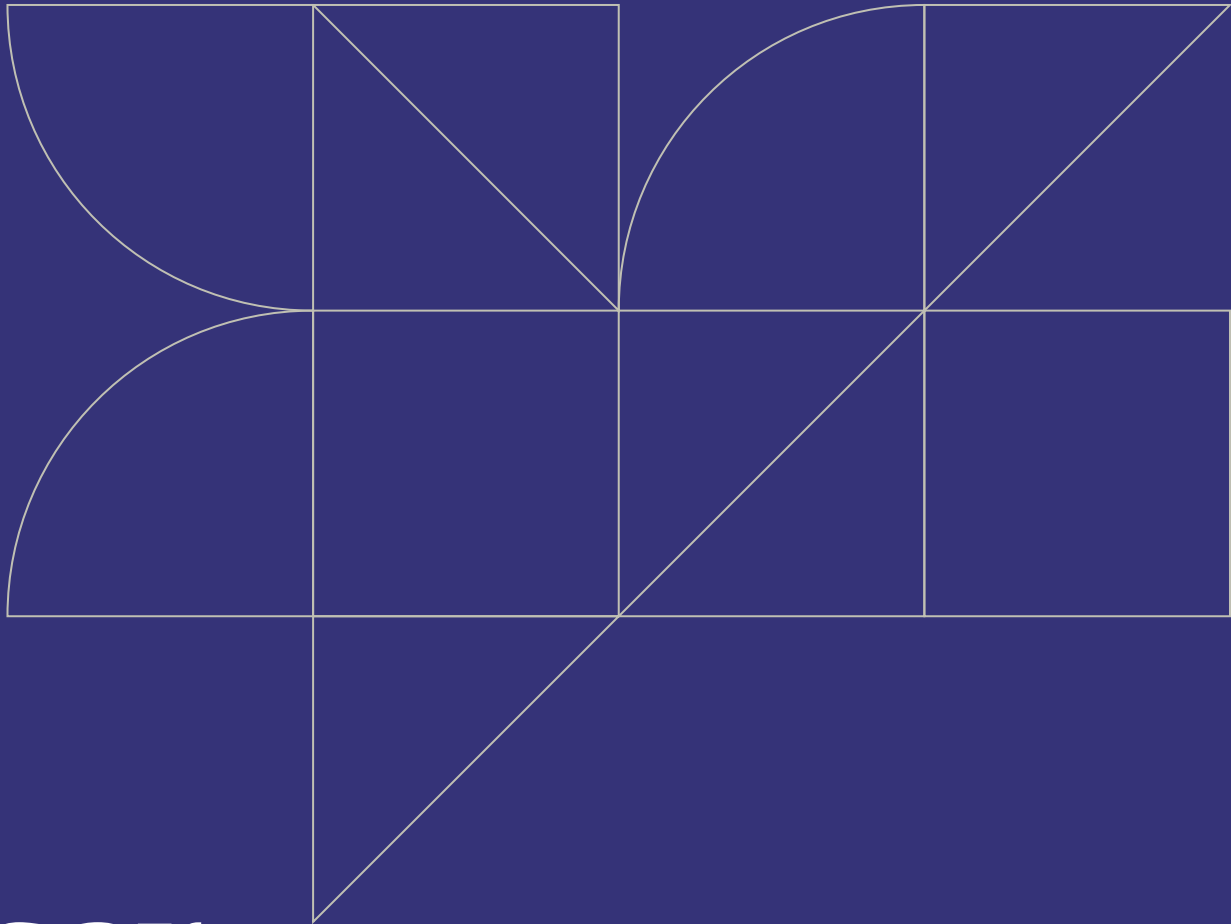
### Visweshwaran N

Practice Head, Payments

### Shivam Vashishtha

Consultant, BFS

This article is published by Zensar BFS Industry Solutions Group (BFS-ISG). BFS-ISG delivers client advisory & implementation services, building BFS industry frameworks & solutions, product competency and Industry thought leadership. The group continuously monitors industry dynamics & evolution, and publishes viewpoints about key business and technology trends shaping the future of the financial services industry.



# zensar

An  RPG Company

At Zensar, we're 'experience-led everything.' We are committed to conceptualizing, designing, engineering, marketing, and managing digital solutions and experiences for over 145+ leading enterprises. Using our 3Es of experience, engineering, and engagement, we harness the power of technology, creativity, and insight to deliver impact.

Part of the \$4.8 billion RPG Group, we are headquartered in Pune, India. Our 10,000+ employees work across 30+ locations worldwide, including Milpitas, Seattle, Princeton, Cape Town, London, Zurich, Singapore, and Mexico City.

For more information, please contact: [info@zensar.com](mailto:info@zensar.com) | [www.zensar.com](http://www.zensar.com)