

intellias

Unwiring the Value of Embedded Finance



Until recently, the **financial industry was an exclusive private club**. To get an invite, you had to get past the regulatory red tape, prove your worth with a complex payment architecture, and earn compliance, anti-fraud, and AML badges.

Embedded finance lowered the barriers to entry. Instead of building complex financial IT systems in-house, non-financial brands can now “*borrow*” ready-to-use blocks from other industry players. Modern IT architectures have empowered FinTechs and banks to distribute some of their core products as a service through embedded solutions: BNPL features for checkout, credit card issuing functionality, etc.

Embedded finance solutions can generate over \$230 billion in net new revenue for brands by 2025.

Use cases	Automotive	Transport & mobility	Retail	Telecom	Smart cities	Smart energy
Digital payments	In-dashboard connected car payments	Embedded ticketing solutions Embedded shipper and freight payments Single payment solution for MaaS applications	Native payment processing Cross-border payments Branded mobile wallets Localized payment options Custom anti-fraud prevention	P2P payments and remittances Mobile wallets QR payment processing Text-based payments	Cashless G2Px payments Embedded public transport and service payments Digitized tax payments	Digital energy payments for all ecosystem players Secure authentication solutions
Lending	In-salon and online instant lending / leasing options	N/A	Buy now pay later (BNPL) Interest-free installment plans Behavior-driven instant consumer credit	N/A	Subsidized lending for social housing Need-based business lending to SMEs/startups	Flexible lending for green energy projects
Insurance	Usage-based car insurance Personalized insurance policies at POS	POS insurance for commercial fleets	Custom device and appliance insurance plans Usage-based warranties	Device insurance Enabling partner for usage-based insurance in auto / transportation	Subsidized health insurance coverage for vulnerable persons Special health insurance plans for self-employed individuals Property insurance plans for government-backed housing projects	Usage-based insurance for equipment

WHAT IS EMBEDDED FINANCE?






Embedded finance is a technology approach to incorporating financial services (like banking or lending) within other products. For example, you can now get a business bank account from your ecommerce platform or attractive lending conditions from an auto dealership.

Just like cloud companies democratized access to infrastructure solutions, embedded finance solutions enable on-demand access to various components of financial services.

To add financial features, brands no longer need to develop a new financial product. Instead, they can take payment processing features distributed as an application programming interface (API) and integrate payments deep into their products. APIs are Lego-like building blocks. Each API encapsulates a set of features and enables data exchanges between your product and a financial platform. With low integration and maintenance costs, financial services APIs enable any company to rapidly launch financial services to the market.

Initiatives such as Open Banking have also dramatically reduced the amount of red tape non-financial companies need to deal with in order to access consumer financial records and exchange data with financial industry players. Open Banking principles extend the perimeter of financial data sharing to new participants — and provide standardized guidelines for embedding API-based financial applications and services. Thanks to API-driven development and open banking, plenty of embedded finance companies have emerged on the global market.

Embedded finance providers

	Payments	Banking (BaaS)	Insurance	Cards	Lending / Financing	Compliance
Embedded finance solutions	 PLAID	 OpenPayd	 socotra	 railsr	 BANXWARE	 Middesk
	 stripe	 Solarisbank	 Tint	 HUBUC	 VAYA	 IDnow.
	 wise	 greendotbank	 penni.io	 Cardless	 jaris	 Socure
	 Resolve	 treezor	 KASKO	 Highnote	 KANMON	 experian.
	 moov	 BBVA	 Salty.	 synctera	 YOULEND	 credolab
	 stitch	 fidor BANK	 afficiency	 CORSEV <small>Innovative Payment Card Models</small>	 CREDIT KEY	 onfido

BENEFITS



Diversify revenue

Unlock new product verticals where the cost to acquire customers and develop new financial products used to be high. Cultivate extra profit streams that complement your core services to offer a one-stop shopping experience to your customers.



Optimize payment costs

Convert payment processing from a cost center into a profit stream by adding to your architecture cheaper multi-currency payments, BNPL offerings, deferred B2B payments, or custom anti-fraud protection.



Offer a continuous customer experience (CX)

Delight customers with contextually prompted, personalized, and on-brand financial products to increase your profit margins without charging more. Provide highly contextual upsell and cross-sell opportunities courtesy of your ecosystem partners.



Attain higher market penetration

Pursue new customer demographics and enter smaller markets at a competitive cost. 85% of embedded finance adopters report being successful at attracting or acquiring new customers at lower-than-usual costs.



Increase loyalty and retention

Re-engage consumers with just-in-time financial offers personalized to their current needs and changing personal circumstances. Build loyalty through smart retention with usage-based plans, behavior-driven promotions, and time-sensitive offers.



Access more customer data

Get a fuller picture of consumers' financial lives and cash flow management patterns to learn about their spending sprees, saving principles, and investment plans. Leverage this knowledge to develop better marketing strategies.

EMBEDDED FINANCE: HOW IT WORKS

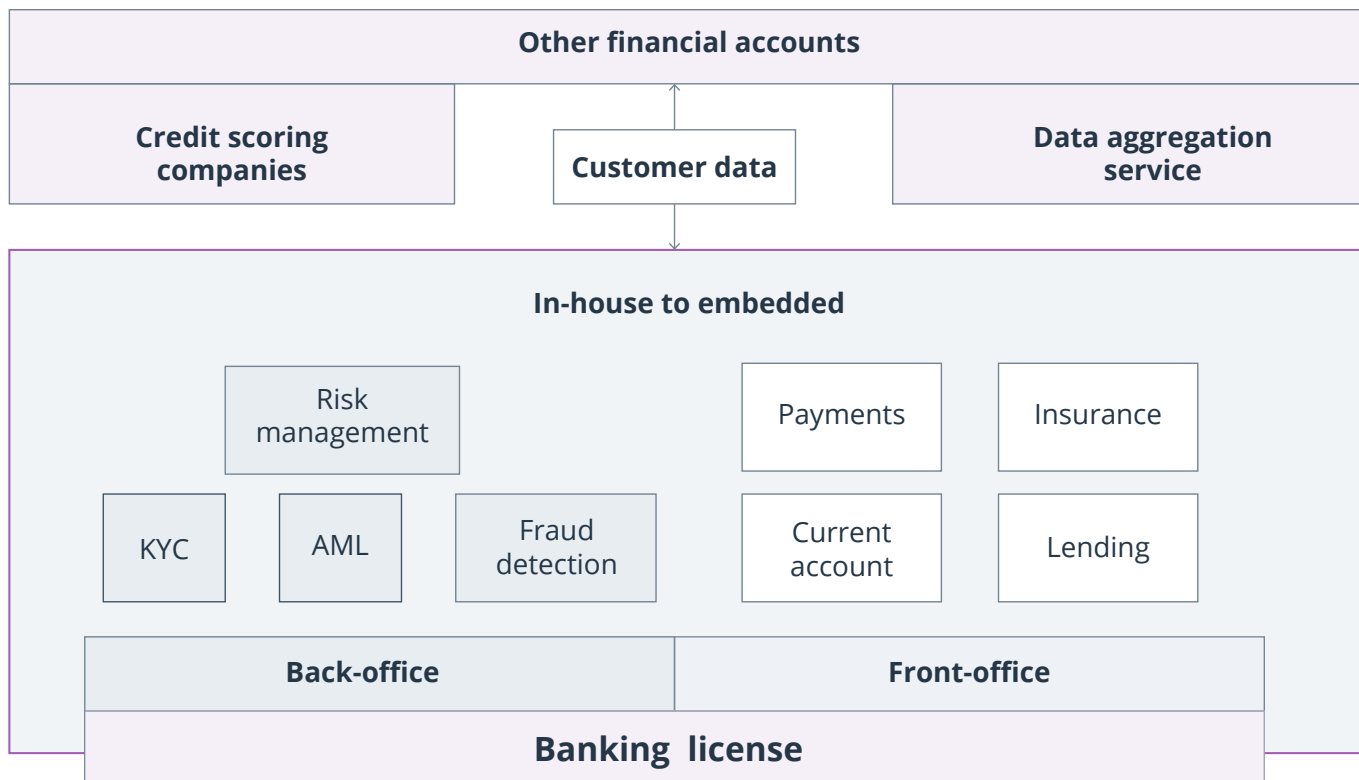
Cloud connectivity, microservices, and APIs have enabled a composite financial services architecture. Composite means that most digital banks are no longer powered by a monolithic core platform. Instead, they operate as loosely coupled collections of financial products developed in-house and embedded from other providers.

IT infrastructure solutions such as microservices, APIs, and banking as a service (BaaS) usher in an era where any product company can also double as a financial services provider but not go through a lengthy regulatory approval process.

Anna Oleksiuk,

Practice Leader of Financial Services, Banking & Fintech

Embedded finance partnerships




A microservices-based system architecture — where financial features are bundled and managed as independent products — has also enabled digital banks to “rent out” some parts of their core systems as a service. Digital banks and other FinTechs practice the same approach.

This software distribution model allows brands to cherry-pick the financial infrastructure they need — credit card issuing or payment processing — and embed it into their platform. On the customer-facing side, the embedded solution can bear no reference to its original provider. On the backend, however, your financial partner still does the heavy lifting when it comes to compliance: KYC, AML, fraud prevention, and risk management. But more importantly, they extend their banking license to you.



USE CASES



We would expect innovation [in finance] to come from startups, to come from existing financial services institutions. But a great majority of it will come from companies that are adding financial services for the very first time.

Angela Strange, General Partner at Andreessen Horowitz

AUTOMOTIVE



Embedded in-dashboard payments



Usage-based embedded insurance



POS financing options



Connected parking payments

On a hardware level, connected vehicles come with the capacity to process **NFC payments or in-dashboard payments** from a stored payment method. Both options already offer a greater degree of convenience for drivers, who don't want to search for coins or pull out a card at the drive-thru, gas station, or toll gate. Advances in computer vision also enable a more advanced machine-to-machine (M2M) payment experience, such as automatic toll payments using license plate recognition.

Usage- and behavior-based embedded insurance is another promising profit stream for the automotive sector. Using telematics data, automotive companies can offer competitive, customizable insurance plans to private clients, commercial fleet owners, and MaaS service operators. GM is looking into the embedded insurance market to trim a \$10 billion US advertising bill, plus speed up claims processing (using telematics data). Tesla, in turn, expects embedded insurance to represent 30% to 40% of the company's auto business.

Insights



**Zero-click payment experience,
powered by computer vision**

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TRANSPORTATION



Digital ticketing solutions



Dynamic road pricing



Embedded shipper and freight payments



Integrated MaaS solutions

A seamless payment experience is essential to increasing the use of multimodal transportation in urban areas. Multiple travel cards, confusing ticket vending machines, and a lack of contactless payments discourage people from using public transport. The average distribution cost per ticket can also be as high as 8% to 10% of its price. These factors, in turn, diminish daily ridership and reduce public transport profitability. Alternative solutions such as app-based ticketing, universal travel cards, or contactless card payment solutions dramatically decrease operating costs for transit companies and leave commuters happier.

In the logistics sector, fleet managers and freight shippers are also looking for an integrated **vendor payment experience**. A high days sales outstanding (DSO) value leave smaller firms cash-tight. Missed vendor payments and lost invoices then cause disruptions deeper down the supply chain. Embedded payments, paired with payment automation, can help logistics companies reduce inefficiencies in quoting, billing, and account reconciliation.

Insights



Mobility as a Service Solution for Improved Transit Experience

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Native payment processing



Branded bank accounts



BNPL and POS financing



Unattended retail solutions

Cashless payment adoption saw triple-digit growth in 2020 — and 65% of global consumers now prefer to use contactless payments as much as possible. For physical retail, commoditization of payment infrastructure opens a new playing field of **self-service solutions**, from digitized checkout desks and smart vending machines to fully unattended retail locations that brands such as 7/11, PepsiCo, and Uniqlo are testing. Not only do consumers find unattended retail faster and more convenient; many are also spending 20% to 40% more per transaction in such settings.

The booming ecommerce space also opens promising opportunities for embedded offerings, from installment payment plans at checkout to branded credit cards. Finally, embedded finance enables vertical SaaS players across industries to organically grow their product portfolios via complementary services. Retail players such as Shopify and Square already delight users with **native payment tools** and **embedded business banking offerings**. For Square, integrated payments have been the fastest-growing product in the seller ecosystem, delivering an average annual gross profit growth of 50% over the past four years.

Insights

Native payments processing for retail chains

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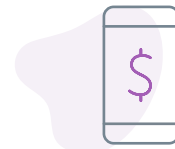
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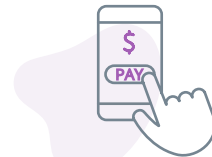
P2P remittance



Mobile money accounts



B2B IoT-based billing solutions



Text-based payments

In developing markets, telecom companies have overtaken banks in remittance and commerce transaction processing. In 2022, there were 1.35 billion registered mobile money accounts processing \$1 trillion in transactions annually. Southeast Asia is the market with the fastest mobile wallet growth; in this region, wallets are now the preferred payment method. Latin America and the Middle East are right behind. Telecom companies can capitalize on existing customer bases to deploy more advanced offerings — **embedded payment tools** for micro, small, and medium-sized enterprises (MSMEs) or attractive **micro crediting** options for credit-thin consumers.

At the same time, telcos can be at the forefront of the **M2M payment sector** and capitalize on the growing IoT payment segment. Using embedded components, organizations can develop usage-based billing plans or bundled services for IoT devices — or extend vertical payment applications to their partners. Orange, for example, has already connected 250,000 vending machines globally and aims to double down on its efforts. By 2030, the intelligent vending machine market is set to hit \$55.53 billion.

Insights



Mobile banking development for telco operator

[Learn more >>>](#)



Contactless urban payments



Cashless G2Px payments



Universal transportation card



Subsidized health insurance plans

Connectivity in global cities is on the rise. From road infrastructure to government services, the pace, speed, and commitment to digitization and improved connectivity are scaling. **Connected devices** can also double as payment devices — a factor that opens new opportunities for contactless toll payments, dynamic road pricing, automatic license payments, or stationing permits for commercial fleets. **Payments in the government sector** — subsidies, social support, taxes, rent assistance — are another area that will inevitably face digitization.

At a lower level, people's homes are getting more connected too. **Smart home payment** transaction volumes topped \$22 billion in 2020 and are set to reach \$164 billion by 2025. Connected TV payments, connected appliance payments, and voice-based payments via home assistants will drive this tidal rise in consumer spending. Hence, appliance manufacturers should prioritize embedding digital wallets and payment processing from merchants.

Insights

Digital Urban Planning Today and Tomorrow

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SMART CITY & SMART HOME

SMART ENERGY



Usage-based utility payments



Public EV charging payments



P2P energy trading



Lending for green projects

Smart meters are digital grid-connected systems with precise energy measurement capabilities. At present, 65% of electricity meters in the US have integrated data processing and two-way communications capabilities. In the EU, 77% of consumers will have a smart meter installed by 2024. Dynamic measurement is essential to better billing. Energy providers can implement **usage-based billing** (instead of fixed-price contracts) to offer more competitive plans and minimize switching.

Connected energy grids also enable new energy distribution models, including P2P trading between consumers and prosumers. Instant embedded payments can incentivize more participants to join. This can help stave off rising energy costs across markets, plus propel the growth of other sectors such as electric vehicle (EV) charging infrastructure development. By 2027, the global EV charging market is set to reach \$115.47 billion, with ample room for new players to move in.

Insights

Sophisticated meter data management platform

Learn more >>>

ABOUT INTELLIAS

Intellias is a global technology partner enabling change and transformation across industries and generating long-lasting value for businesses, people, and the wider world.

We inspire confidence in our partners and clients from various verticals that their digital initiatives will succeed. With over 20 years of market experience, we help our partners thrive in a digital-first world by combining engineering craftsmanship and industry insights to solve challenges of any nature, scale, and complexity.

Focused on the business's strategic objectives, we enhance the product vision, technology application, and production capabilities so that your company is ready to respond to the increasing call for change.

Our people-centric approach and passion for clients' success unite engineers, creators, and innovators around the globe who breathe life into great ideas with the power of digital technology.



Get in touch!

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