Modularity in payments:

Using what each provider does best rather than single-vendor solutions

Emre Talay, Chief Operating Officer

Merchant Acquiring Conference | Nov 4, 2025

Payrails

From monoliths to agile constellations

Composable modules enable innovation and lower risk

Others did it.
Payments are next.

Flexible, modular, customizable & powerful

AUTOMOTIVE | SOFTWARE | IT

“THE OLD WAY” - LEGACY STACK

One provider - built to accept, not to optimise payments

What’s possible:

- Transaction processing
- Credit card focus
- Minimal fraud prevention
- Standardized solutions

Impact:

- Inflexibility
- Volume limitations
- Outages = revenue loss
- Scaling = cost explosion

ADDING MORE, CHANGING LITTLE

Value-added features don’t fix lock-in

Value-added services:

- Fraud management
- Global payouts
- Analytics and insights
- Security measures

Bundled but opaque and partial

Impact:

- Limited geo coverage of geo
- Lock-ins = margin pressure + compliance risk

PSD3, PCI DSS 4.0, Instant Payments raise the bar for auditability

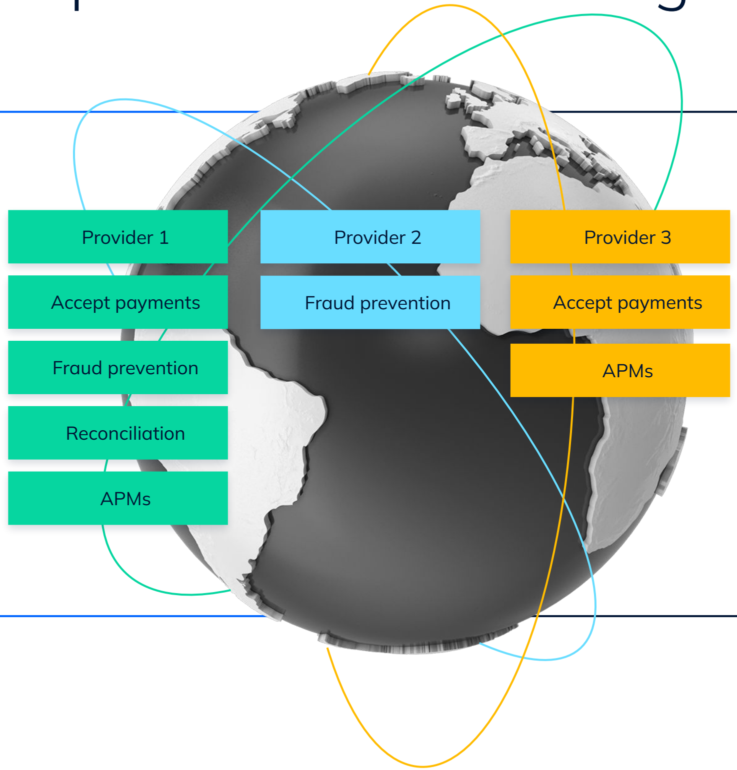
Payrails

MULTI-PROCESSOR FRAGMENTATION

Multi-acquirer improves reach but fragments data & ops

Benefits of multi-processor setups:

- Improved auth rates
- Risk mitigation
- Cost optimization
- More payment options



The complexity that followed:

- Ballooning operating costs & siloed data across PSPs
- Rising compliance, regulatory challenges
- Diversity without data discipline underperforms

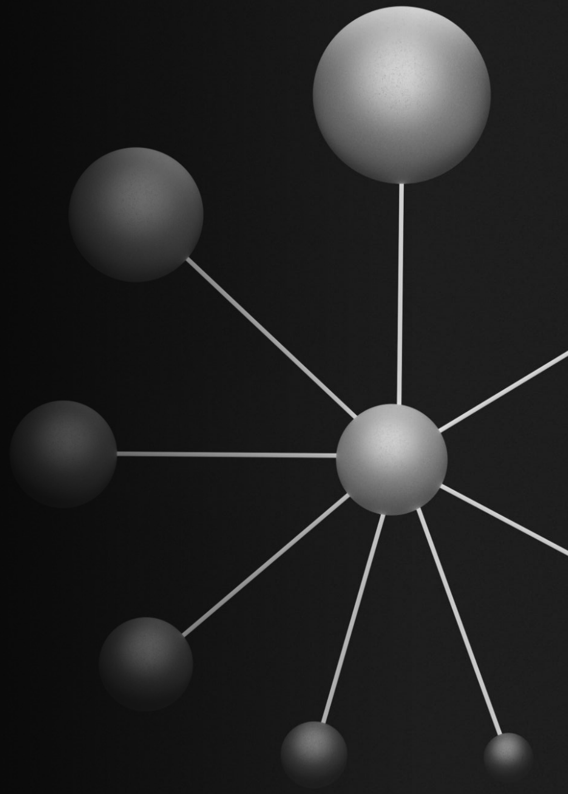
Payrails

Payments are evolving into modular, workflow-driven, and multi-processor enabled designed for business-specific needs

Transaction based → **Business logic specific workflows**

Phase 1	Phase 2	Phase 3	Phase 4
Beginning of payments	Bundling	Fragmentation	**Merchants are going modular**
Single processors with **limited capabilities**	Single processor with a portfolio of **value-added**	Multi-processor setup	**Modular, highly configurable, E2E multi-processor layers**

What if modularity could be built as infrastructure?



True modularity and partnership require agnosticity

TECHNOLOGICAL

- ✓ Real-time integration parity with every provider
- ✓ Continuous maintenance
- ✓ Reflects provider innovation

COMMERCIAL

- ? No revenue-sharing bias
- ? No Vendor lock-in
- ? Independent product vision

Assemble your payment OS

Payrails

YOUR WORKFLOWS, YOUR WAY

Tailored to business needs, not rigid templates

COMPANY A

High-risk onboarding flow
with extra verification steps:

- Agnostic KYC/KYB flow
- 3DS authentication

COMPANY B

Automate subscription payments retries
with custom logic:

- Payment Orchestration
- Agnostic Tokenization
- Workflow for retries

COMPANY C

Do-coupled payouts in marketplace
payment flow:

- Payment Orchestration
- Payouts
- Ledger
- Reconciliation

Payrails

Why marketplaces feel challenges

GLOSSARY

PSD2 relevant terms

Some of the key concepts for navigating PSD2 and marketplace payments.

Money flow

How money moves from the customer's bank account to the sub-merchant's bank account through financially licensed providers.

Transaction flow

Flow of transaction data showing how payment and payout-related information is processed and shared within the ecosystem.

KYC/KYB flow

Collection and sharing of KYC information in a compliant and secure manner.

PSP EMBEDDED PLATFORM PAYMENTS

Convenience vs Lock-in

- Geo-coverage limitation
- Lock-in effect
- Payment method limitation
- Multiple integrations to maintain
- Feature parity among providers leading degraded service

KYC & ONBOARDING: KYC DATA IS COLLECTED BY THE PSP AND ONBOARDED TO THEIR PLATFORM

Sub-merchant uploads documents to PSPs KYC service and registers with PSP → PSP or their service providers check KYC information and approve or decline → Validated sellers KYC information is stored by the PSP

PAYMENT ACCEPTANCE & ACQUIRING

Shopper pays via platforms/sub sellers white labeled checkout page → Credit card/payment information is stored by the PSP → Payment is acquired and settled in to PSPs bank account

PAYMENT SPLIT AND LEDGERING OF MICRO TRANSACTIONS (PAYMENT COSTS REFUNDS ETC.)

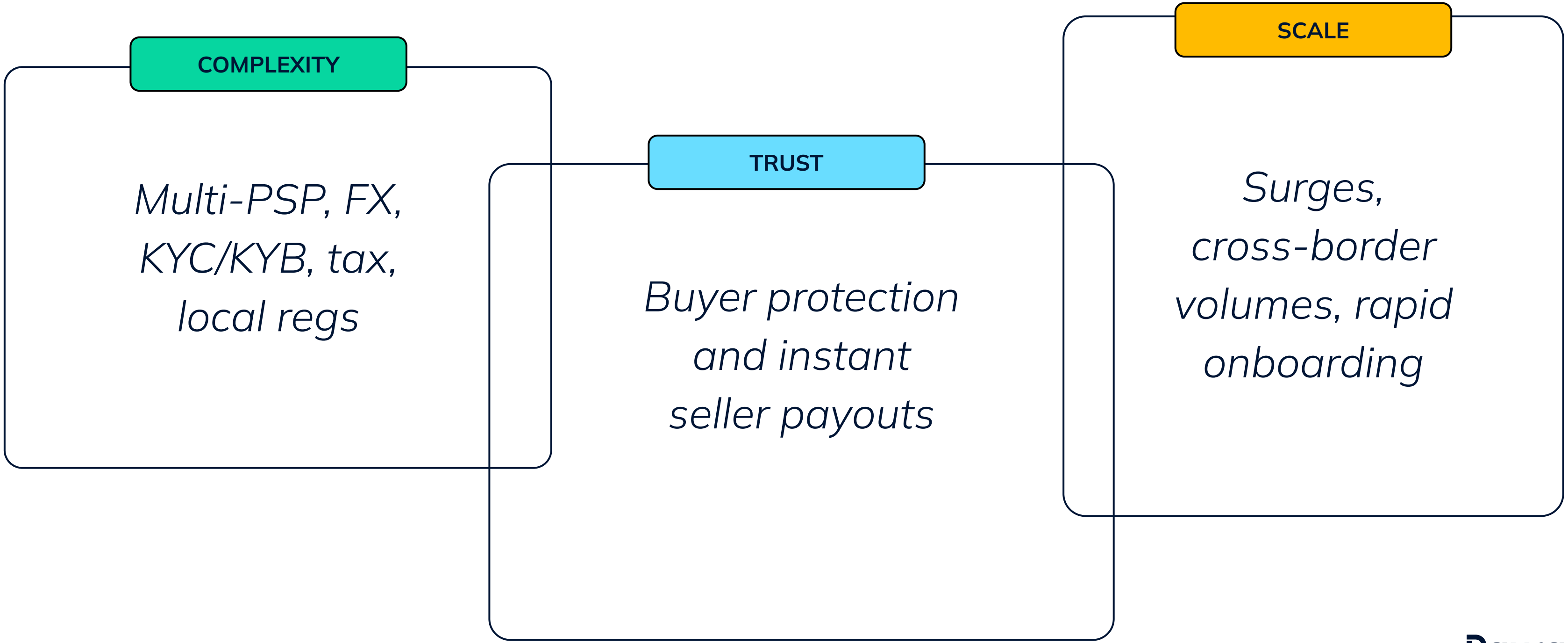
Platform defines the payment split → PSP deducts and manages micro transactions → Payable balance of sub-merchant accumulates in PSPs environment

PAYOUTS: SUB MERCHANTS AND PLATFORMS ARE PAID OUT BY THE PSPS

Platform defines payout frequency and rules → PSPs are triggered to execute the payouts via the platform

COMPLEXITY, TRUST AND SCALE

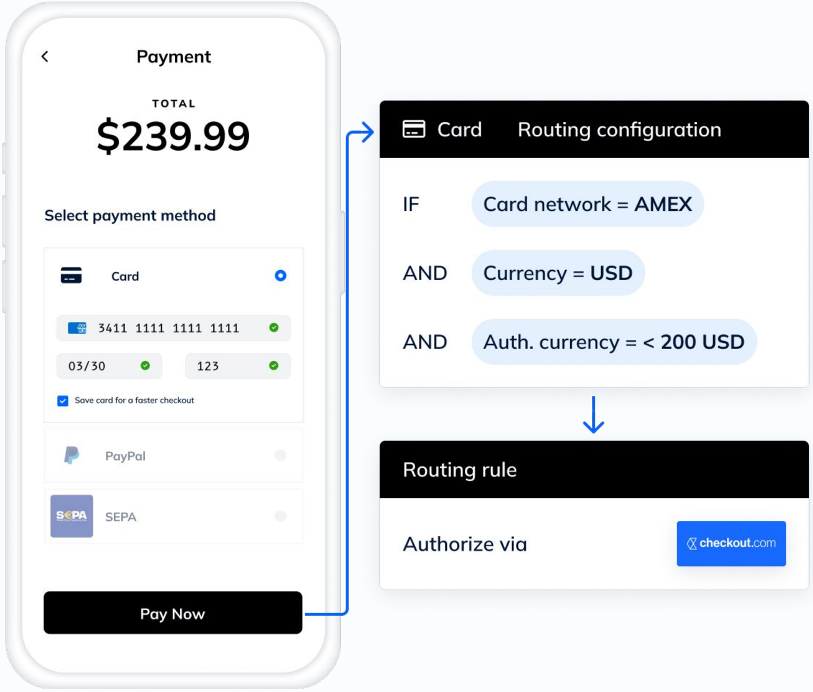
Every marketplace balances three forces



Payrails

Checkout reliability defines brand trust

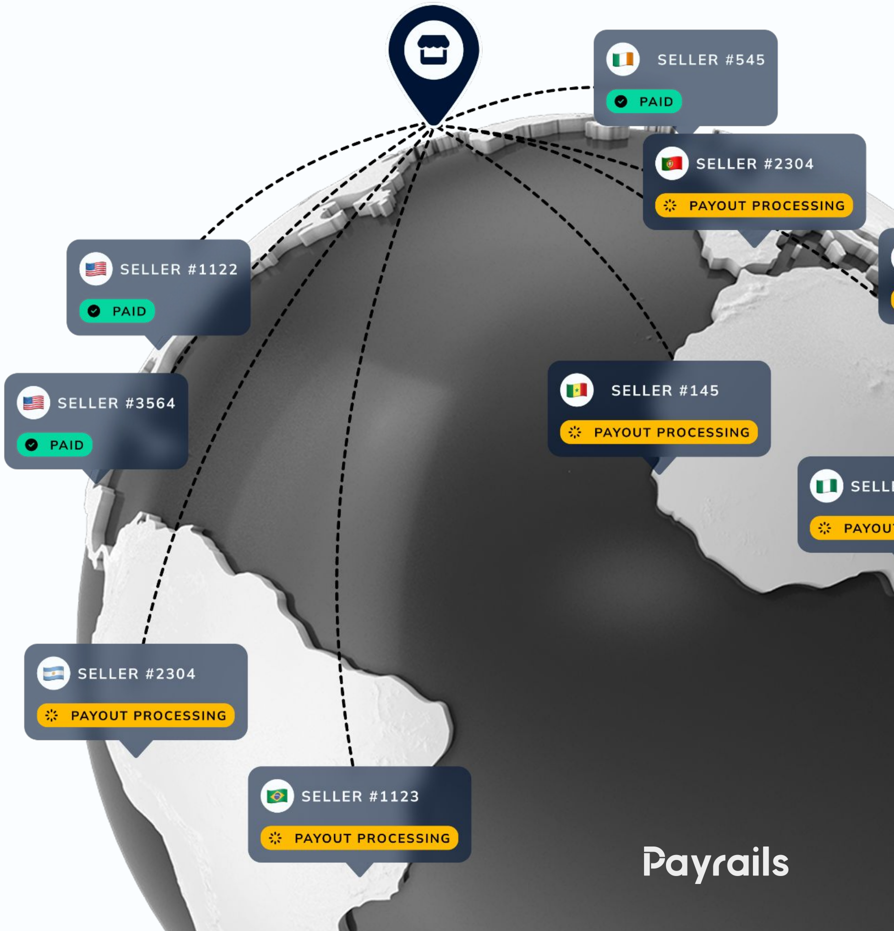
- Payments are trust moments — failure breaks it instantly.
- Missing or failing methods = abandoned carts.
- Smart retries + routing lift approvals 15–20 %.
- Reliable checkout = reliable brand.



Payrails

Seller liquidity equals seller loyalty

- Sellers care most about “When do I get paid?”
- Instant or same-day payouts boost retention.
- Transparent FX + local rails = trust at scale.
- Liquidity isn’t ops — it’s strategy



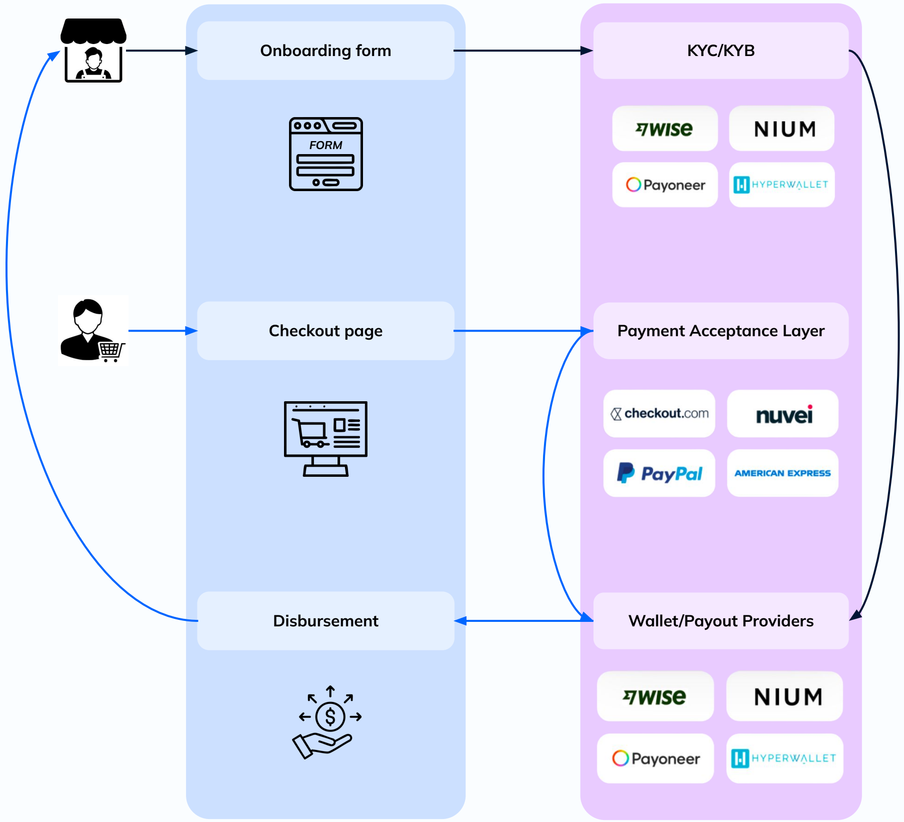
Payrails

Managing the money & KYC flow in a compliant way

Our Client is expanding fast and need global payment acceptance and payout solution

Challenge was being MoR and doing cross-border payouts is costly and non-compliant

Proposed solution was decoupling pay-ins from payouts to avoid being in the money flow



Payrails

CASE STUDY

Reduce payment costs by 30%

A global online marketplace for language learning that connects 100,000 tutors from 180 countries with millions of learners for personalized one-on-one lessons across 120 subjects.

THE CHALLENGE:

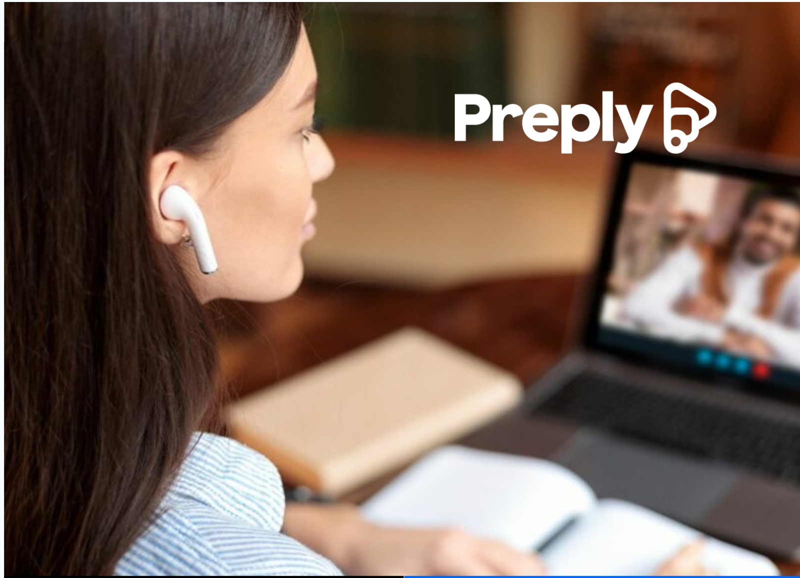
Maximizing Customer Lifetime Value (CLV) while minimizing costs

- **Optimize global payments** and local checkout experiences for tutors and learners.
- **Unified payout flow** and gaining more control over the FX exposure
- **Reduce churn and automate** financial operations to boost CLV.

THE SOLUTION:

Increasing success rates with a unified integration layer and tokenization

- **Unified integration layer**
- **Dynamic routing and smart retries**
- **PSP-agnostic tokenization**
- **Automated analytics and reconciliation**



30%

Recovery of select failed payments

25%

Decrease in failure rate

Payrails

Thank You!

Emre Talay