



**openCMS**

# **OpenCMS: Next-Generation Card Management System**

A Modular, PCI DSS-Compliant Architecture  
for End-to-End Card Lifecycle Management



# A Centralised Platform for the Future of Payments

OpenCMS is a modular platform designed for financial institutions to launch and manage Debit, Credit, and Prepaid products. Built on international security standards, it enables banks to scale operations while maintaining rigorous compliance.

## 1. Foundation (Security & Core)

Operating in a PCI DSS-certified environment with a robust Product Configuration Factory.



## 2. Engine (Operations)

Automated lifecycle management from bulk issuance to real-time transaction monitoring.



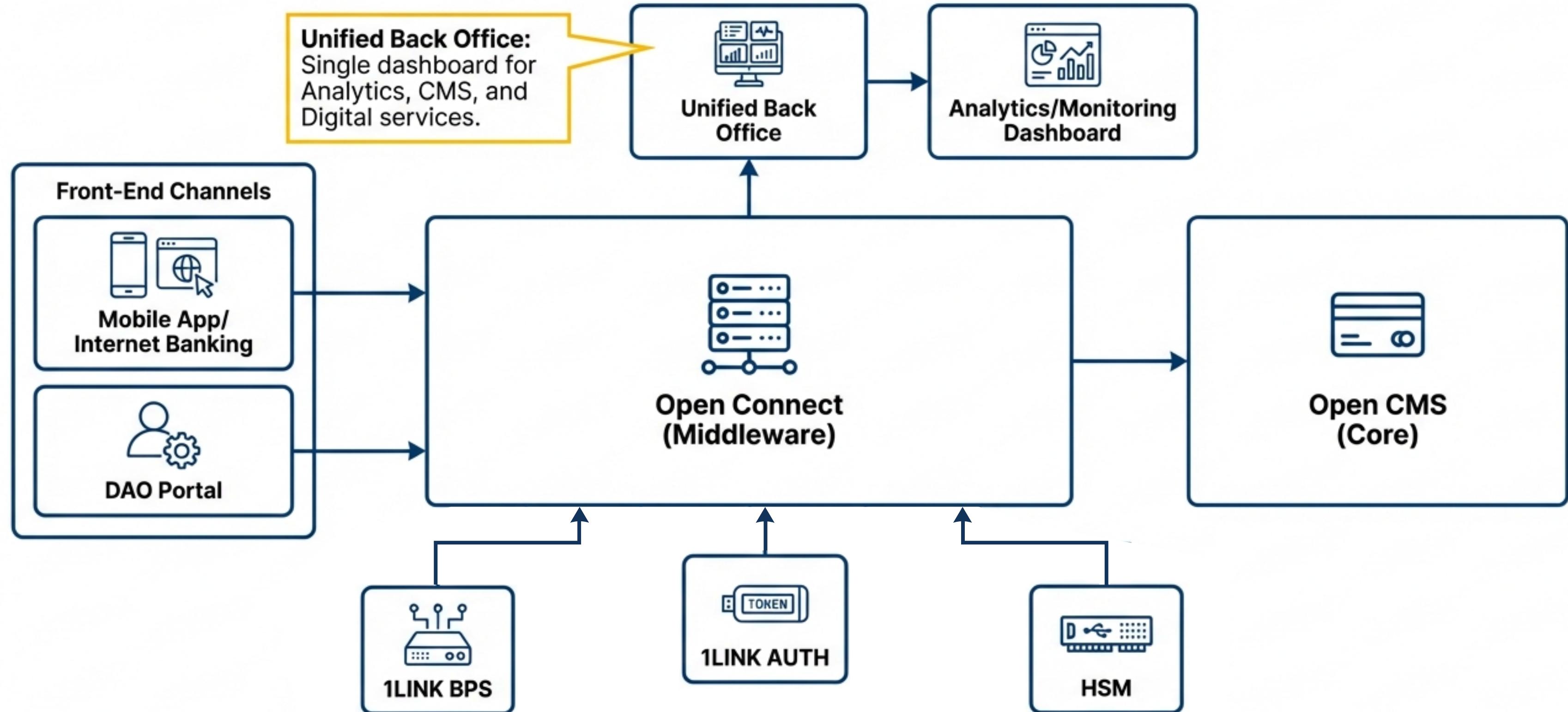
## 3. Connections (Ecosystem)

Seamless integration via Open Connect to national switches (1LINK, RAAST) and global schemes.



Key Outcome: Empowering institutions to move from legacy silos to a unified, API-first card ecosystem.

# Solution Architecture & Ecosystem



# The Foundation: Product Configuration Factory

Defining products by strict operational parameters before issuance.

- **BIN Management:** Link products to unique BIN ranges or specific prefixes for scheme association (e.g., PayPak, UnionPay).
- **KYC Tiering:** Enforce regulatory compliance by linking products to KYC levels (e.g., Basic vs. Enhanced). Mismatched KYC blocks issuance automatically.
- **Channel Control:** Granular toggles to set operational status (Active/Inactive) for specific channels like ATM, POS, and E-commerce.

| Channel ID | Channel Name               | Is International | Status   | Actions |
|------------|----------------------------|------------------|----------|---------|
| 1          | ATM-OnUs                   | No               | Active   | ...     |
| 2          | ATM-OffUs-Local            | No               | InActive | ...     |
| 3          | ATM-OffUs-International    | Yes              | Active   | ...     |
| 4          | ONLINE-OffUs-Local         | No               | Active   | ...     |
| 5          | ONLINE-OffUs-International | Yes              | Active   | ...     |

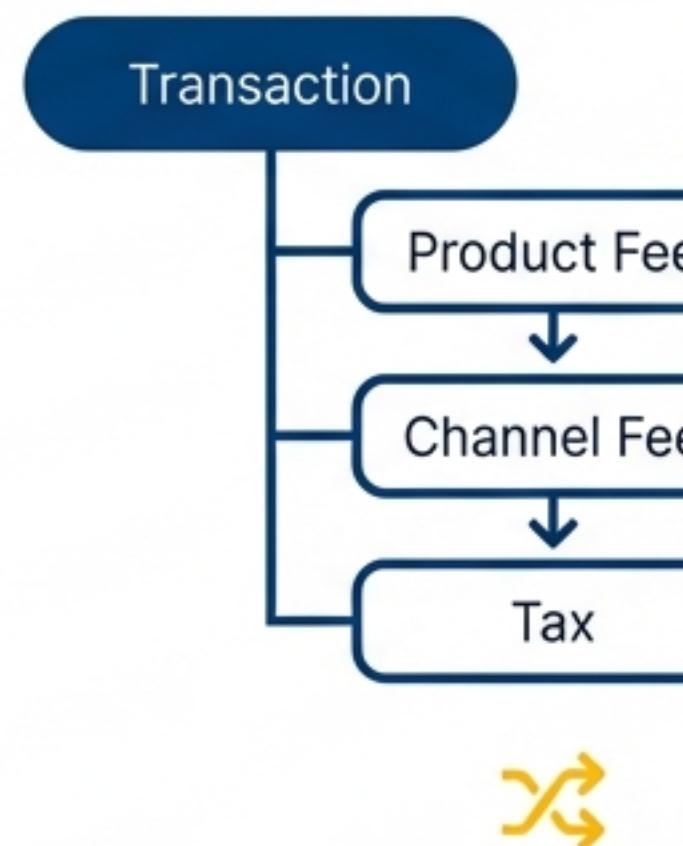
Rows per page: 5 ▾ 1-5 of 8 < >

# Financial Engineering: Fee & Limit Management

## The Fee Engine

Support for Fixed, Percentage-based, and Slab-based charges.

- Scope Application: Apply fees at Product, Channel, or Transaction levels.
- Fee Types: Logic for Issuance, Renewal, Replacement, and Transaction fees.



## Transaction Limits

Granular control over “On-Us” vs “Off-Us” channels.

- Cycle-Based Logic: Cumulative limits based on Channels
- Frequency Caps: Restrict the number of allowed transactions per cycle.



# Advanced Risk Control: Blocking & Restrictions

Proactive fraud mitigation and regulatory compliance at the product level.

## Geographic Control (ISO 3166-1)

Real-time Country Blocking using standard ISO 3166-1 alpha-2 codes. Crucial for FATF compliance.



## Merchant Control (MCC Blocking)

Block specific transaction types based on ISO 18245 Merchant Category Codes (e.g., gambling, crypto).



Retail  
(5311)



Gambling  
(7995)

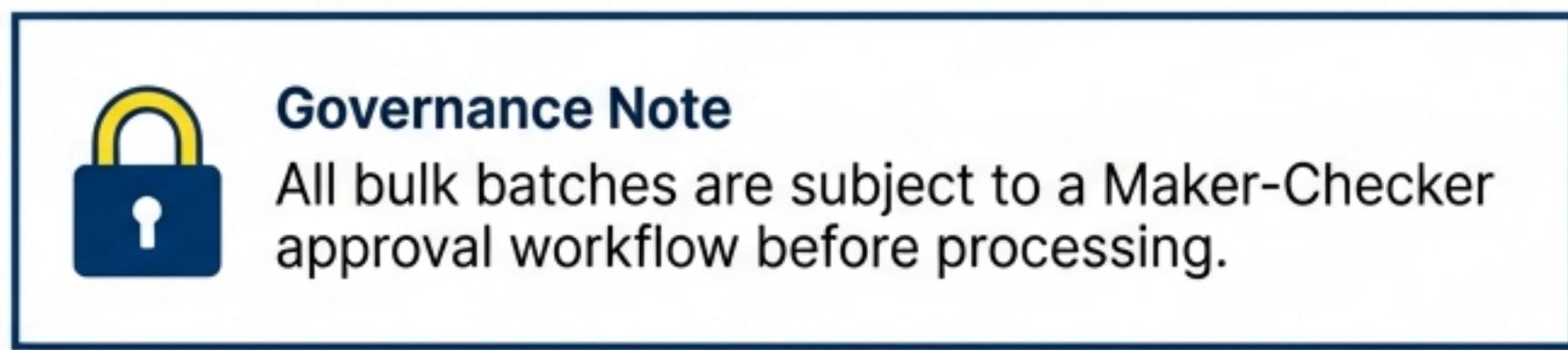
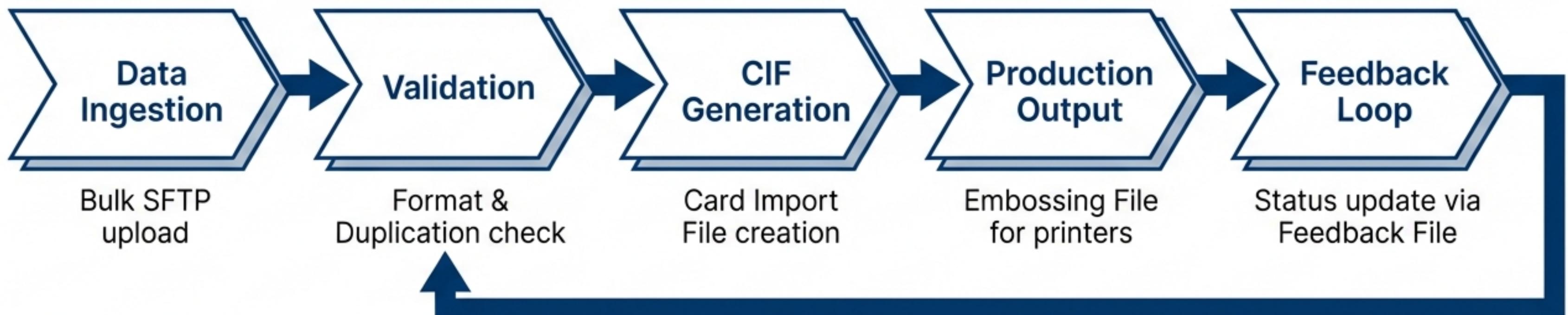


Crypto  
(6051)



Dining  
(5812)

# The Engine: Bulk Issuance & Production



# Operational Excellence: CRM & Support

Empowering support staff with a 360-degree customer view.

## Real-Time Actions

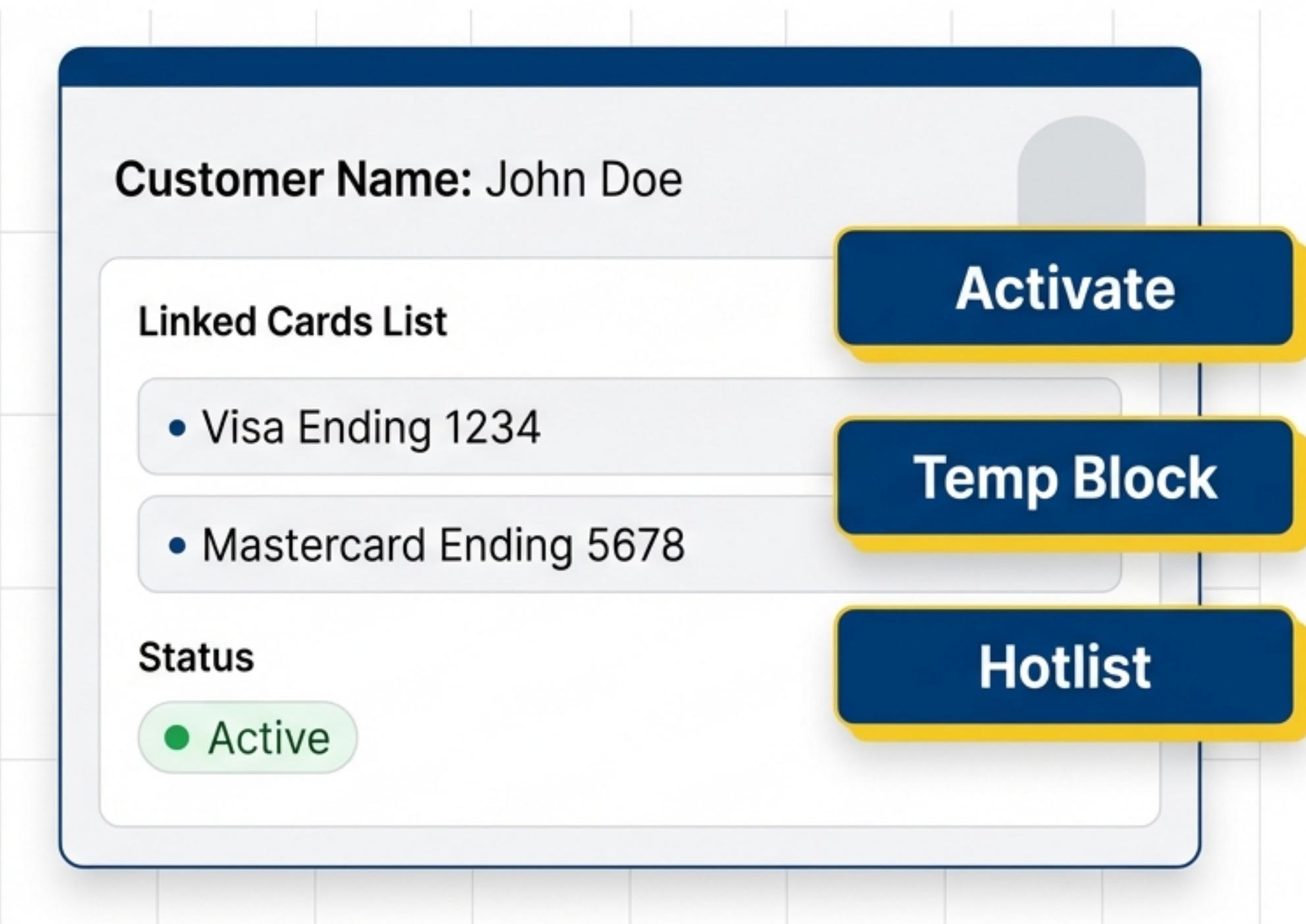
Instantly Activate, Temporarily Block, or Hotlist (Permanent Block) cards.

## Limit Adjustments

Modify transaction limits on the fly based on customer requests.

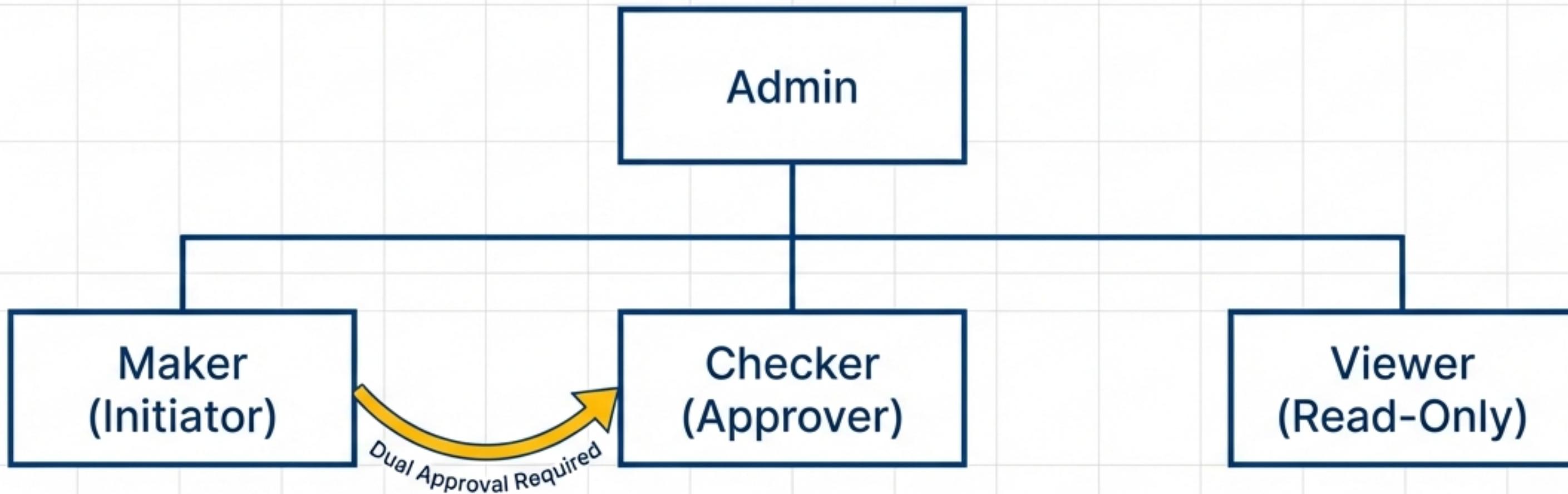
## Auditability

Every agent action is logged with User ID and Timestamp for compliance.



# Governance & Security: User Management

Enforcing Segregation of Duties through RBAC.



## RBAC

Granular permissions ensuring users only access what they need.

## Lifecycle Management

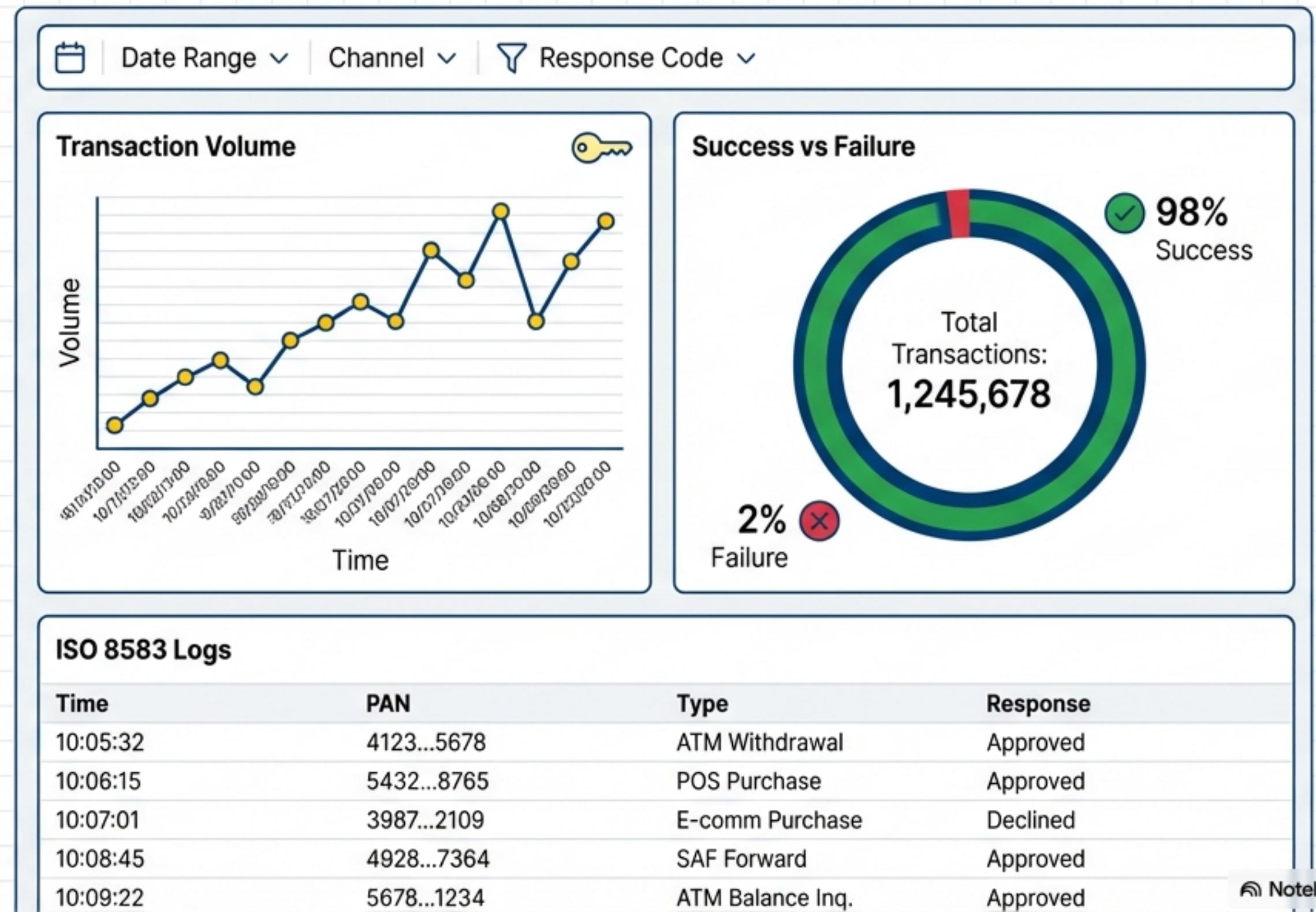
Strict workflows for User Creation, Approval, and Deactivation.

## Audit Logs

Detailed tracking of login attempts, session activities, and administrative actions.

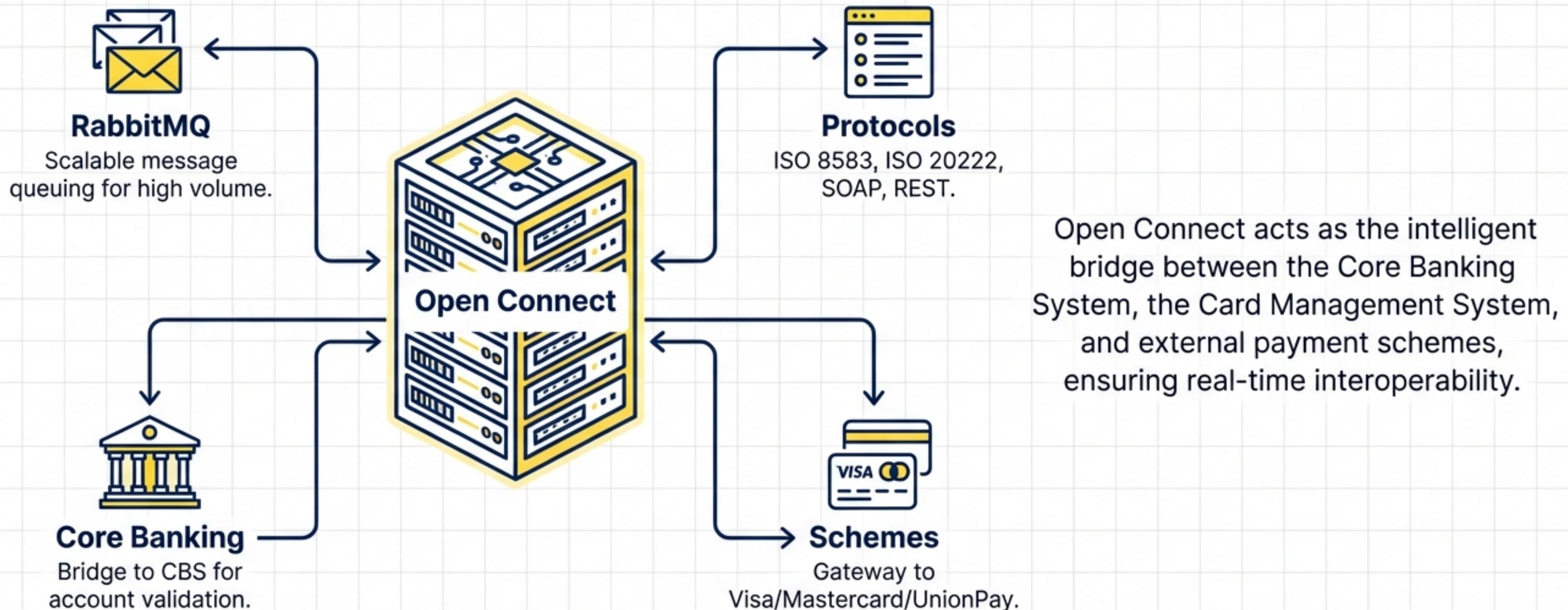
# Operational Intelligence: Monitoring & Dashboards

- **Live Monitoring:** View Real-time and Store-and-Forward (SAF) transactions.
- **ISO Integration:** Detailed visibility into ISO 8583 message logs for reconciliation.
- **Analytics:** Track success rates across ATM, POS, and E-commerce.



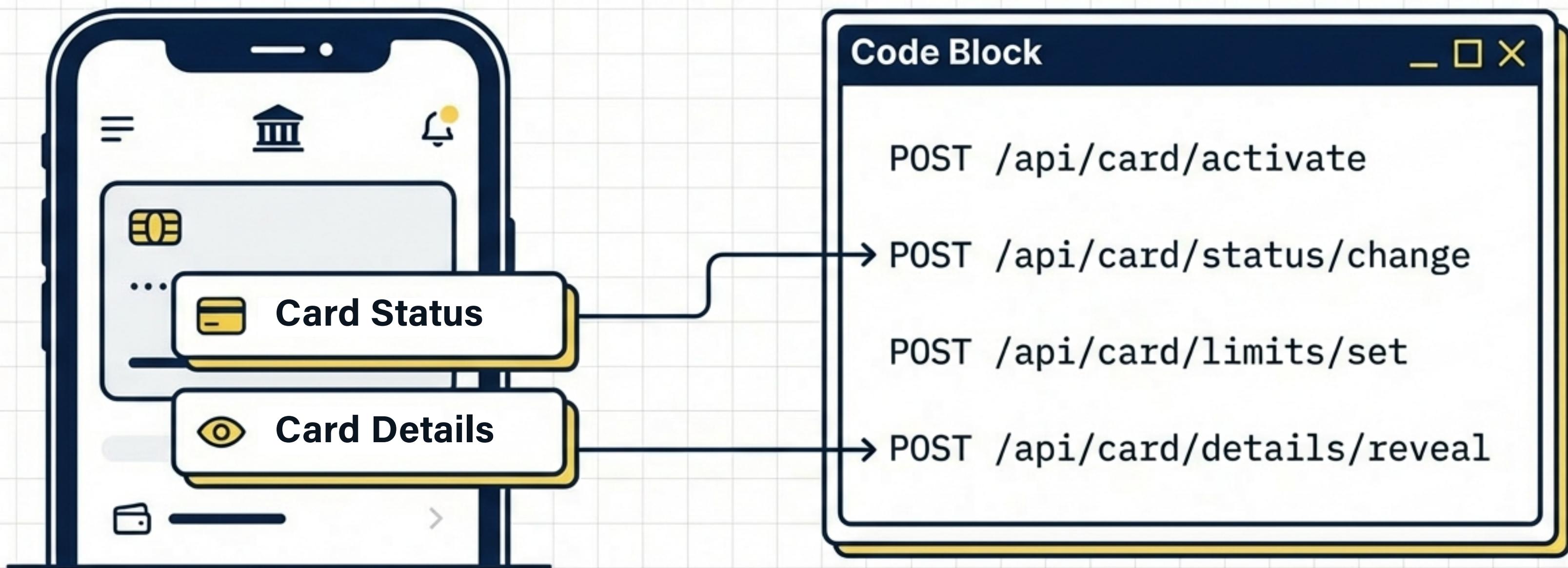
# The Nervous System: Open Connect Integration Hub

A High-Throughput, SOA-Based Switching Engine.



# The Digital Layer: Unified API Suite

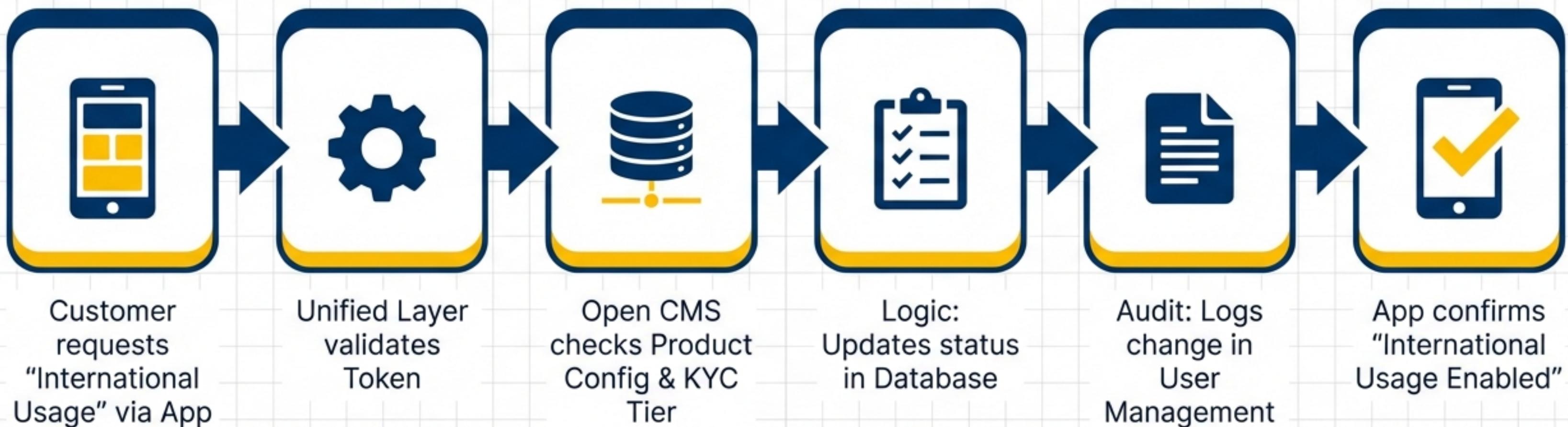
RESTful endpoints powering modern digital channels.



Security: Token-based authentication for all channel requests.

# Use Case: The Digital Customer Journey

## Enabling International Usage



# Strategic Value & Operational Readiness

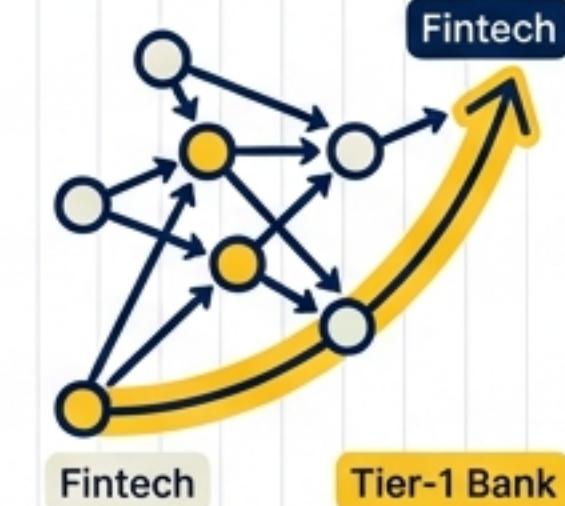
## Secure

PCI DSS-certified environment ensuring data protection.



## Scalable

Powered by RabbitMQ and SOA to support growth from Fintech to Tier-1 Bank.



## Connected

Pre-integrated with 1Link, and Global Schemes.



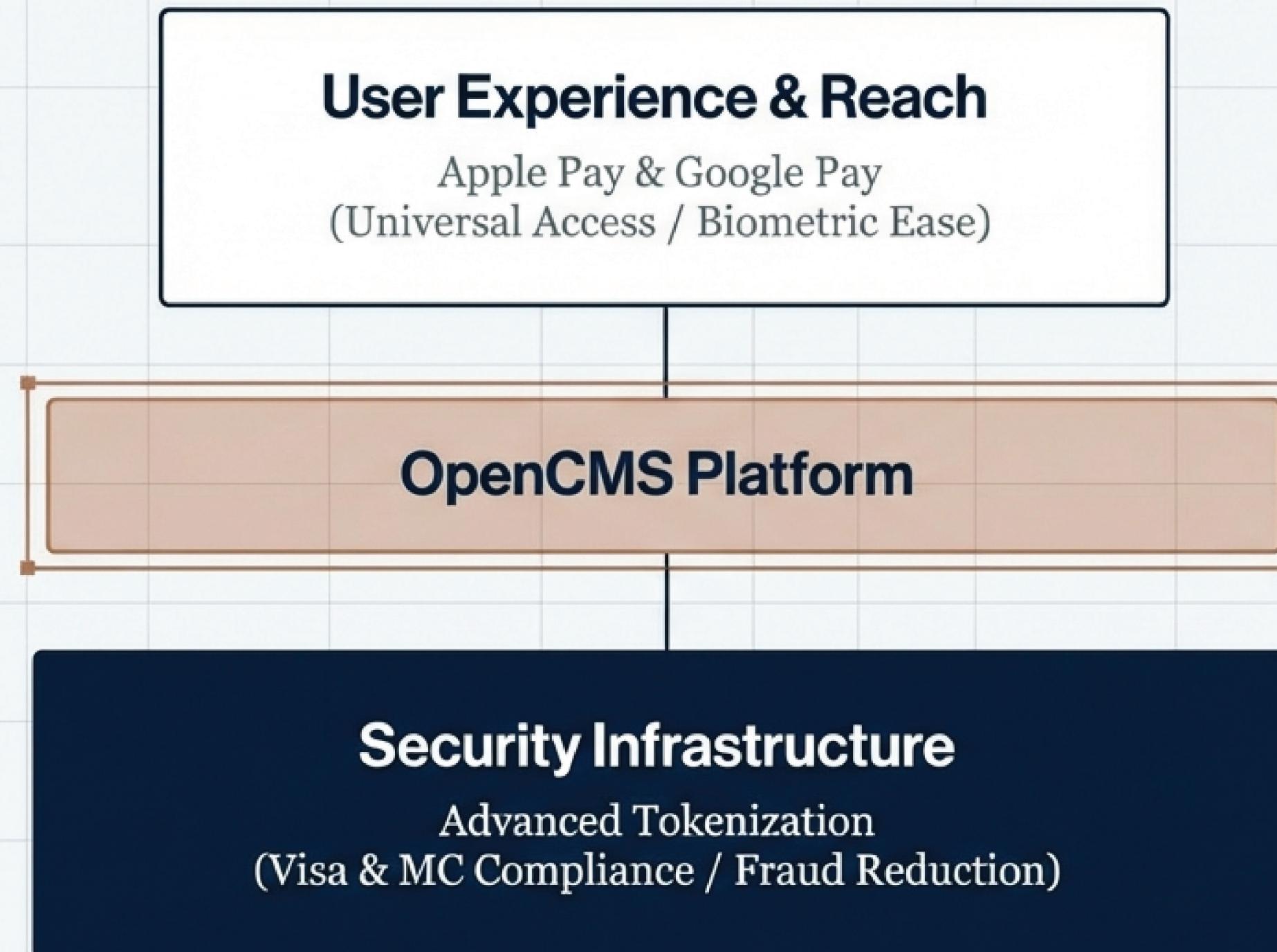
## Controlled

Total governance via Maker-Checker workflows and granular configuration.



# The Unified Roadmap

OpenCMS is bridging the gap between legacy infrastructure and the next generation of payment rails.



“Delivering security at the core to enable innovation at the edge.”

# Universal Android Reach: Google Pay Support

Expand the card's footprint across the global Android ecosystem with native 'Tap-to-Pay' capabilities.



## Physical World Utility

### Tap-to-Pay

Expand the card's footprint across the global Android ecosystem with native 'Tap-to-Pay' capabilities.

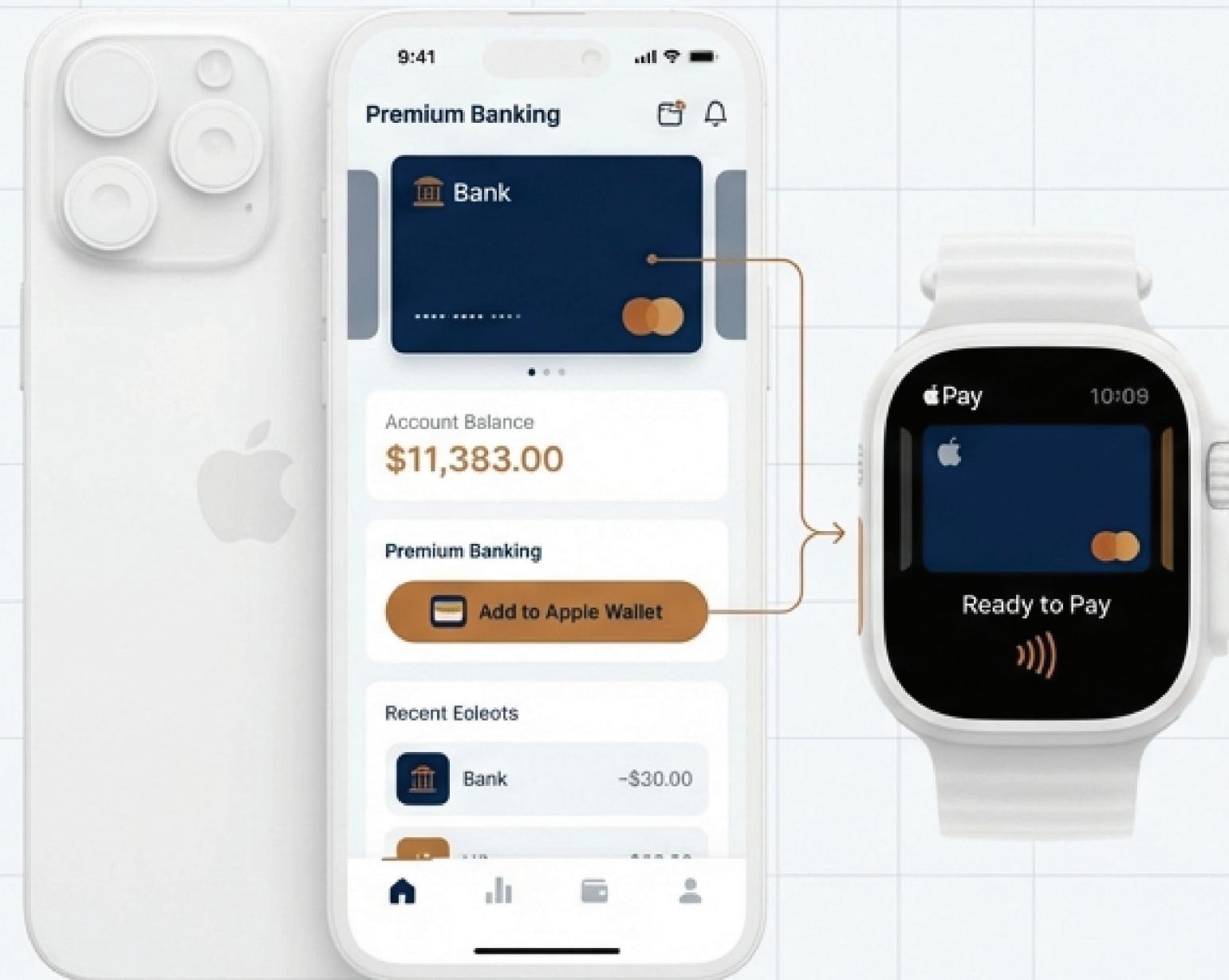


## Digital Commerce Utility

### Simplified E-commerce

Streamline the online checkout experience with 'Click-to-Pay' integration for web and mobile merchants.

# Capturing the iOS Ecosystem: Apple Pay Integration



## The Onboarding Experience

### Seamless Provisioning

Enable customers to add virtual or physical cards to the Apple Wallet directly from the mobile app.

## The Transaction Security

### Biometric Trust

Support for secure, tokenized NFC transactions via iPhone and Apple Watch. Authenticated by FaceID or TouchID.