Omni-Channel Redemption — a Reference Architecture

How to keep redemption identical across in-store, online, and mobile without forking the back end into three separate programs.

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EXECUTIVE SUMMARY

Most broken gift card programs are not broken at the card — they are broken at the fork: a stored-value module inside the e-commerce stack, a gift card feature inside the POS, and a wallet inside the mobile app, each holding its own version of the balance. The result is duplicated data, reconciliation overhead, and customers who hit channel gaps at exactly the moment they intend to spend.

The commercial stakes are real: omni-channel shoppers spend 15–30% more than multi-channel shoppers. This paper describes the reference architecture Ogloba operates for enterprise programs — every channel fronting a single activation, balance, and redemption pipeline, with one back office and one Transaction Data Warehouse behind it — plus the non-functional requirements and rollout patterns that make it work, drawn from deployments such as a hypermarket group running 19 markets from one platform and a telecom retailer live across 900+ outlets in three months.

1. Why redemption forks happen — and what they cost

Channel forks are rarely a deliberate decision. A program launches in-store; e-commerce adds its own stored-value service to ship a feature quickly; the app team wraps a wallet around a third-party SDK. Each system works — separately. The costs surface later:

- **Duplicated data.** Three balance stores mean three versions of the truth, and a standing reconciliation workload to keep them loosely consistent.
- **Channel gaps.** A card bought online that cannot be redeemed at the till — or a partial in-store redemption invisible to the app — breaks the customer promise at the moment of spend.
- **Program divergence.** Promotions, refunds, and fraud rules get implemented per channel, so the "one program" drifts into three subtly different ones.
- **Slower expansion.** Every new market or retail partner multiplies integration work across each forked stack instead of adding one endpoint to a shared pipeline.

> The design principle: the digital and physical spheres should complement rather than compete with one another. POS, online, mobile, marketplaces, and partner channels should run through the same activation, balance, and redemption pipeline — one source of truth, no reconciliation overhead.

2. The reference architecture

The architecture has four layers. Channels stay thin; value logic lives once.

1 · CHANNEL EDGE

POS, web store, mobile app, kiosks, marketplaces, partner distributors — one catalogue, every channel. Channels render and capture; they do not own balances.

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2 · CORE VALUE PIPELINE (SINGLE INSTANCE)

Activation, balance management, and redemption as one service: real-time activation with fraud checks and PCI-grade validation the moment a card is sold; top-ups, partial redemptions, refunds, and promotional campaigns all executed against the same ledger.

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3 · BACK OFFICE & DATA

A single back office (permission, product, programme management, and hotline modules) with a live audit trail — and a dedicated Transaction Data Warehouse (TDW) as the single source of truth for reporting, reconciliation, and risk.

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4 · INTEGRATION SURFACE

Ready-to-use webservice APIs hooking into cash registers, e-commerce platforms, partner portals, and distributor systems — with sandbox access and documentation provided up front.

Because every channel calls the same pipeline, channel parity is not a feature to be maintained — it is a property of the topology. A card activated at the POS is instantly redeemable online; a partial redemption in the app is instantly visible at the till; a promotion configured in the back office applies everywhere at once.

3. Non-functionals that make or break it

Centralising redemption raises the bar on the core: if one pipeline serves every channel, that pipeline must behave like core transactional infrastructure, not a side system.

Constant uptime
Architecture engineered for ongoing data processing and rapid recovery, across steady and spike volumes

Millisecond
Per-transaction fraud screening — rules engine plus ML models inspecting every transaction before it settles

PCI DSS L1
Certified to PCI DSS v4.0.1 at Service Provider Level 1; Tier-IV data centers, encryption at rest and in transit

Multi-everything
Multi-brand, multi-currency, multi-country as first-class dimensions — 19 markets run for one hypermarket group

- **Reliability first.** Prepaid and gift card programs live or die on trust: every transaction has to settle correctly, fast, and securely across countries, currencies, and channels.
- **Fraud at the core, not the edge.** With one pipeline, fraud screening runs once, consistently, on every transaction — rather than being re-implemented per channel with per-channel blind spots.
- **Compliance as configuration.** VAT reporting, KYC/AML for money-transfer flows, and per-market consumer-protection specifics are configured per market on the same platform — with central inventory management and per-market customization.
- **Roles and audit.** Granular role-based permissions, mandatory approval flows on balance-touching operations, and full audit logs keep a centralised pipeline reviewable.

4. Rollout patterns and proof points

Integrate in weeks, migrate without disruption

Open APIs and a modular design mean most integrations land in weeks rather than quarters. Where a legacy program already exists, conversion and migration move the existing card portfolio onto the platform without disruption — the pattern used when a multi-banner Middle East retailer retired an aging gift card system and consolidated its data in the TDW.

Pilot, then expand on channel and geography

The shortest path to value is a 90-day pilot in one or two markets with a tightly scoped feature set and clear program KPIs — then expansion on channel and geography once those KPIs are stable. New retailers and new countries reuse the same back office.

Deployments that demonstrate the pattern

- **Decathlon** unified gift card activation across its in-store POS network and online channels — 1.5M cards activated annually with instant in-store + online program parity across markets.
- **KIABI** extended its program to 10 new markets simultaneously with full local compliance, one back office, and a consistent customer experience across borders.
- **Carrefour** rolled out digital cards across 12 countries in 90 days on central inventory and real-time activation.
- **A regional telecom retailer** went operational across 900+ outlets and 15,000 merchants within three months.

Self-diagnosis: has your redemption stack forked?

SYMPTOM	WHAT IT INDICATES
A card's balance can differ by channel, even briefly	Multiple ledgers with reconciliation instead of one pipeline
Refunds are processed in different tools per channel	Value operations implemented per channel, not centrally
Promotions must be configured more than once to run everywhere	Program logic has diverged across stacks
Each new market or partner needs integration work in several systems	Expansion cost scales with the number of forks, not programs

Review your architecture with us

Ogloba's team will walk you through the reference architecture against your current stack — integration plan, migration path for existing portfolios, and the fraud and compliance posture included.

Talk to the Ogloba team → ogloba.com/contact

This working draft consolidates material previously published on ogloba.com — the omni-channel platform pages, technology and back-office capability pages, the gift card benefits guide, and case studies. All figures are as published there and remain subject to final business review.