VIEW POINT

THE AUTONOMOUS PAYMENTS ENTERPRISE

Infosys
Navigate your next

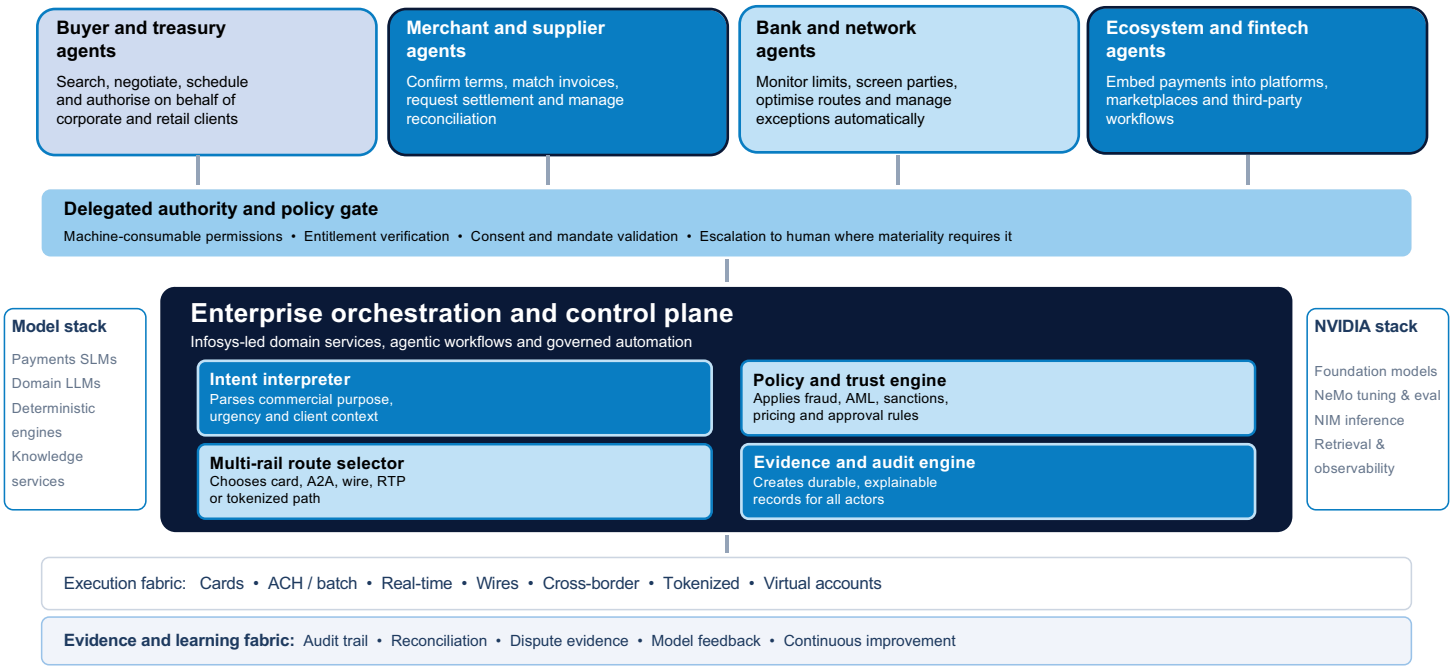
A thought process that helps redesign cards, retail payments, wholesale payments, transaction banking and treasury for an AI-native, multi-rail future.

Strategic lens
Infosys AI First Value Framework for payment systems

Core idea
One enterprise fabric for cards, non-card payments and emerging tokenized money

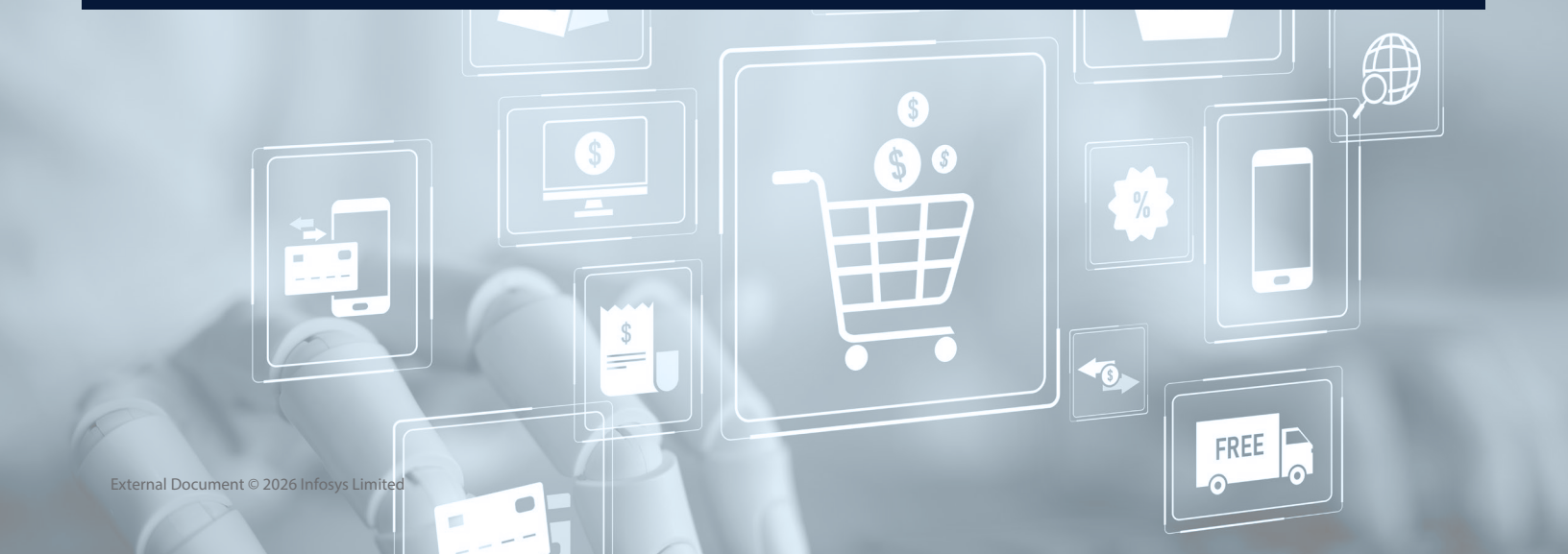
Agentic commerce and the autonomous payments flow

How software agents, human actors and the payment fabric interact in a governed operating model



How software agents, human actors and the payment fabric interact in a governed operating model — from delegated authority through orchestration to durable evidence.

Executive proposition The winners in payments will not be defined by a new processor alone. They will be defined by the quality of their orchestration layer, the strength of their control plane, the reuse of evidence across the enterprise, and their ability to let cards, account-to-account rails and new money forms coexist economically. The institutions that solve this first will set the terms for the next decade of money movement.



The strategic agenda has widened

Payments leaders can no longer treat renewal as a processor replacement story. Cards, retail account-to-account payments, real-time rails, wholesale flows, transaction banking, treasury, merchant acquiring, cross-border liquidity and new tokenized forms of money now collide inside the same operating model. At the same time, software agents are beginning to initiate and negotiate commercial activity autonomously. A bank can modernise a platform and still underperform if service levels, controls, liquidity treatment, exception handling and ecosystem coordination remain fragmented.

The practical question for management teams is no longer how to replace one ageing engine. It is how to run the enterprise so that customer channels, treasury desks, operations teams, compliance functions, counterparties and partner ecosystems can consume the right rail, the right balance-sheet treatment and the right control posture at the right time.

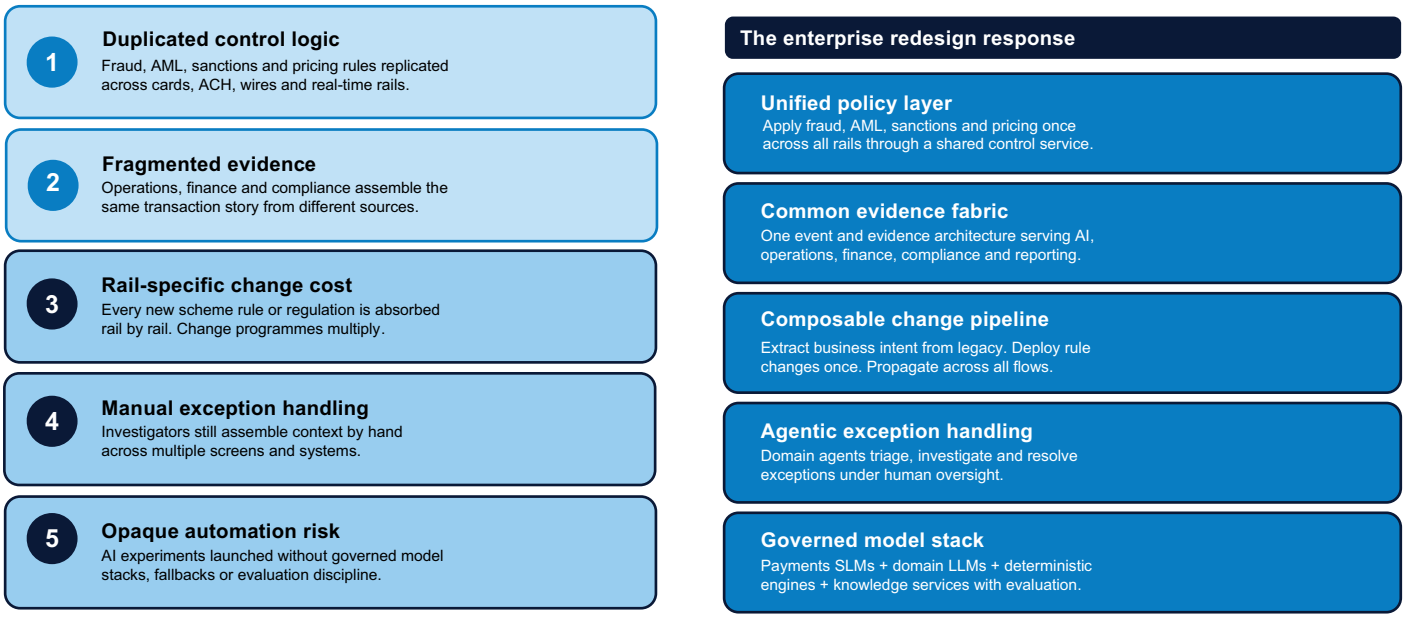
The institutions that move first will not merely improve processing efficiency. They will make payments strategy composable. That means exposing shared enterprise capabilities once, applying policy once across products and rails, reusing evidence across finance, operations and control functions, and creating optionality for future settlement models without rebuilding the estate every time the market shifts.

- Run today's cards and non-card businesses with stronger service levels and lower exception cost.
- Shift from rail-specific change programmes to a reusable enterprise control and evidence fabric.
- Operate a multi-rail portfolio with explicit routing economics, liquidity intelligence and client-aware choices.
- Prepare for tokenized deposits, stablecoins and programmable settlement without weakening core controls.
- Develop payment-specific SLMs and LLMs that improve automation quality rather than introduce opaque risk.

"Modernisation still matters, but it is no longer the centre of gravity. The broader objective is enterprise renewal for money movement."

The enterprise complexity tax in cards and payments

Why fragmented operating models cost more than institutions realise — and where the hidden drag accumulates



The enterprise complexity tax: five hidden cost drivers in fragmented payments operating models and the enterprise redesign response required to address them.

Why the current operating model underperforms

Most institutions still run payments as a federation of product towers. Cards, ACH, instant payments, wires, cross-border, merchant services and treasury operations each have separate teams, rules, data stores, vendor dependencies and performance dashboards. That can appear manageable one product at a time. It becomes structurally expensive the moment the enterprise must explain end-to-end outcomes, support clients across several rails, or prove control effectiveness in real time.

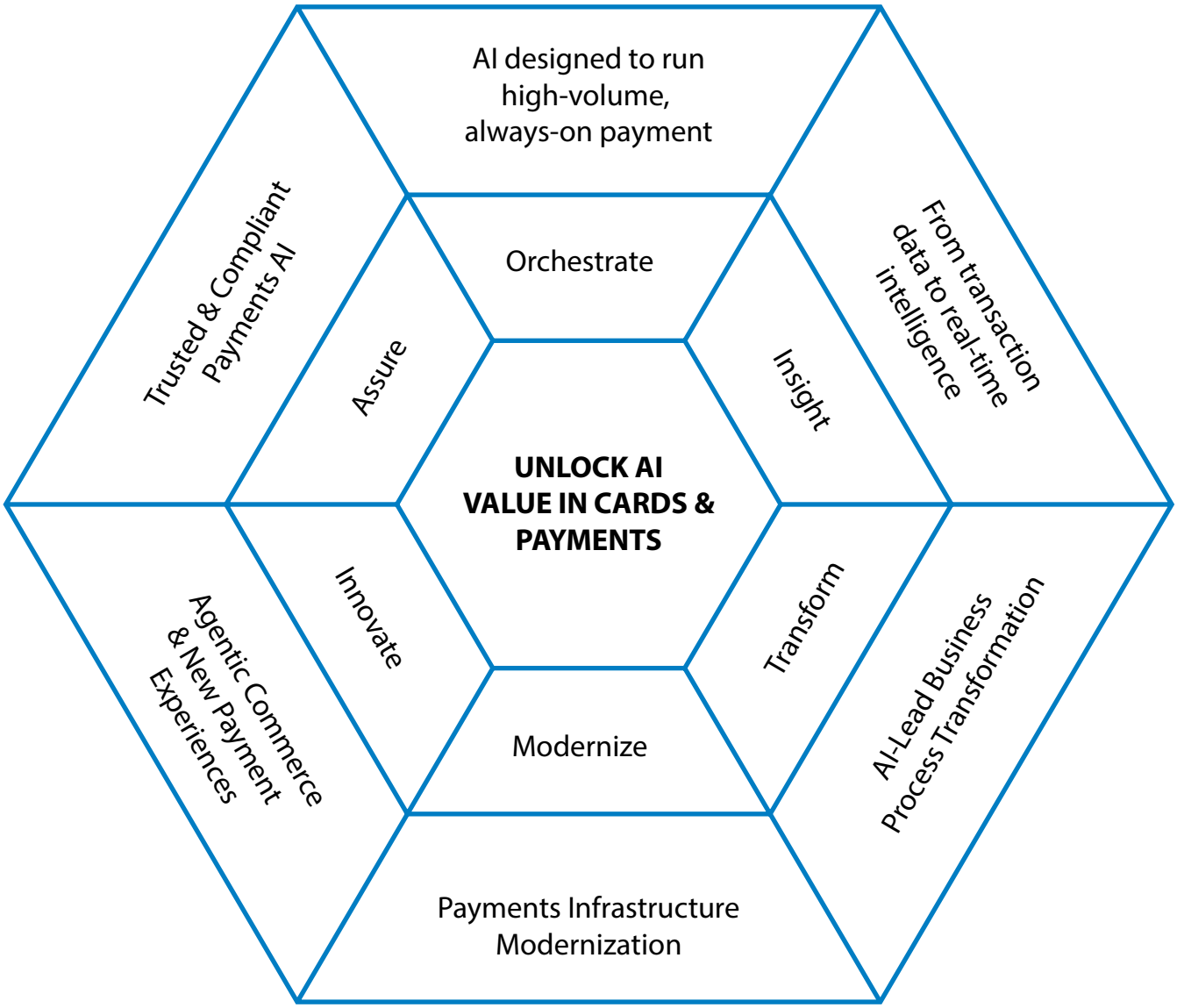
The flaw is not purely technological. Enterprise outcomes are produced by the interaction of technology, operations, data, finance, partner dependencies and policy. When those layers stay disjointed, a new rail does not remove manual work, a new hub does not fix investigations, and a new channel does not create reusable evidence. The bank launches change, but the old operating model keeps absorbing the benefit.

This is why many transformation programmes feel technically live but commercially incomplete. They improve a visible component of the estate while leaving control interpretation, exception resolution, accounting treatment and servicing effort trapped in the legacy world.

What typically drags transformation down

Structural drag	How it shows up in practice	Why it matters
Rail-specific programmes	Each rail receives its own business case, team and roadmap.	Technology grows, but enterprise simplification does not.
Hidden legacy intent	Rules sit inside code, spreadsheets, manuals and operations muscle memory.	Migration risk rises and change takes longer than expected.
Weak evidence fabric	Data pipelines support reporting but not reusable, decision-grade evidence.	AI, finance, servicing and controls cannot rely on the same truth set.
Manual queues preserved	New screens are introduced while investigators still assemble context by hand.	Cost remains high and service levels remain uneven.
Controls added too late	Trust, policy and financial-crime checks are bolted on after use-case design.	Automation quality drops and regulatory conversations become harder.

Reframing renewal through the Infosys AI First Value Framework



The value of applying an enterprise AI lens such as the Infosys AI First Value Framework is that it forces management teams to think across six value pools rather than one model or one workflow. In payments, those pools act as a renewal architecture: AI Strategy & Engineering defines the enterprise control plane and future-state orchestration model; Data for AI creates the event, knowledge and evidence fabric; Process AI rewires day-to-day work across exception-heavy operations; Agentic Legacy Modernization extracts business intent from ageing estates; Physical AI extends observability and action into terminals and edge environments; and AI Trust embeds policy, security, governance and auditability so automation does not become opaque.

Used properly, the framework is not a menu of pilots. It is an operating model for money movement. It helps banks move from fragmented product change to one governed enterprise fabric where cards, non-card payments, treasury services and new money forms can coexist under shared controls and reusable evidence.

How the six value pools translate into payments renewal

Value pool	Role in the target state	Representative enterprise plays
AI Strategy & Engineering	Defines the enterprise architecture for payment cognition and agent orchestration.	Policy and routing layer, shared payment services, enterprise control tower
Data for AI	Creates the event, knowledge and evidence fabric needed for reliable decisioning.	Transaction graph, retrieval services, entity resolution, common evidence APIs
Process AI	Redesigns exception-heavy work with domain agents and human oversight.	Fraud triage, servicing copilots, investigations, reconciliation, treasury operations
Agentic Legacy Modernization	Extracts business intent from legacy applications and lowers migration risk.	Rules mining, code interpretation, interface rationalisation, phased renewal
Physical AI	Extends observability and action to devices and operational edge points.	Terminal telemetry, ATM and device health, branch capture, field operations
AI Trust	Embeds policy, model governance, security and auditability into the platform itself.	Identity, model evaluation, policy traceability, explainability, human override

The model stack that will matter in payments

Generic language models are not enough for payments. The domain is dense with standards, scheme rules, pricing logic, cut-off behaviour, entity hierarchies, accounting implications and country-specific controls. Some tasks need broad reasoning across policy, history and client context. Others require bounded, low-latency interpretation where smaller models can be tuned, evaluated and governed far more tightly.

A credible target state therefore uses a layered stack: payments-specific SLMs for narrow, frequent tasks; larger domain models for synthesis and cross-document reasoning; deterministic engines for routing, limits, posting and ledger control; and knowledge services that connect structured and unstructured evidence. The winning design is not model maximalism. It is disciplined orchestration across models, rules and retrieval.

Capability tier	Best-fit tasks	Control posture
Payments SLMs	Message parsing, exception classification, reconciliation hints, sanctions-evidence drafting	Strict input bounds, benchmark coverage and deterministic fallbacks
Domain LLMs	Policy synthesis, investigations, legacy code interpretation, client narrative generation	Retrieval grounding, approval workflows and output guardrails
Deterministic engines	Routing, pricing, limits, posting and ledger controls	High precision, version traceability and regression testing
Knowledge services	Entity resolution, graph search, evidence stitching and semantic retrieval	Access control, provenance, freshness and lineage management

> "The goal is not to replace deterministic logic with language models. The goal is to combine models, rules and retrieval so the enterprise can automate more work without weakening the control posture."

Multi-rail strategy and the coexistence of new money forms

A mature payments strategy is no longer single-rail. The enterprise must decide when to use cards, ACH, real-time rails, wires, correspondent routes, virtual accounts, internal transfers, tokenized deposits or, in selected cases, stablecoin paths. That decision is not purely technical. It depends on customer context, liquidity location, time sensitivity, counterparty structure, pricing, legal treatment and the quality of evidence required after the fact.

This is the right frame for stablecoins as well. The practical issue is not whether stablecoins replace fiat rails. It is where tokenized forms of money can coexist with existing mechanisms under acceptable legal, risk, operational and customer conditions. For most banks, the defensible path is to preserve the primacy of regulated account-based rails, selectively explore tokenized bank liabilities where balance-sheet continuity matters, and evaluate stablecoin pathways only where use cases, jurisdictions and counterparties are strong enough to support them.

Illustrative fit-for-purpose route choices

Use-case family	Likely primary options	What should decide the route
Everyday consumer and SMB payments	Cards, ACH, RTP	Acceptance footprint, urgency, dispute posture and fraud thresholds
Urgent corporate domestic payments	RTP, wires	Value, cut-off, confirmation needs, client entitlements and liquidity view
Cross-border treasury and supplier payments	Correspondent flows, wires, selected programmable options	FX path, beneficiary certainty, transparency, sanctions and reconciliation burden
Merchant settlement and embedded flows	Cards, ACH, internal transfers, virtual accounts	Merchant economics, settlement speed, reserve treatment and evidence quality
Programmable B2B settlement	Tokenized deposits and selected tokenized money paths	Workflow programmability, legal claim structure, wallet governance and accounting treatment

Agentic commerce changes the demand side of payments

The next major shift is arriving from the demand side, not only from the supply side. Software agents will increasingly search, negotiate, schedule, authorise and evidence commercial activity on behalf of buyers, sellers, treasury teams and service providers. That changes the operating model because payment is no longer simply the end of a human-initiated workflow. It becomes one step inside a machine-managed commercial process. Consider a corporate procurement agent that negotiates terms with a supplier agent, selects a payment rail based on treasury policy, triggers execution and records evidence - all without a human touching the payment instruction. The bank must govern every step of that chain.

Banks, fintechs, card networks and transaction-banking providers therefore need a new set of capabilities: delegated authority for machine actors, machine-consumable policy and entitlement services, auditable escalation points, and dispute and evidence rights that can survive autonomous action. The institutions that prepare early will be able to support machine-originated commerce without losing control of risk, accountability or client trust.

The target state: the autonomous cards and payments enterprise

The future state is not an AI layer bolted onto today's estate. It is a redesign in which cards and non-card flows are run as one policy-aware, evidence-rich enterprise capability. Product teams still matter. Rail-specific expertise still matters. But the institution retires duplicated data, duplicated investigations, duplicated control interpretation and duplicated exception handling wherever possible.

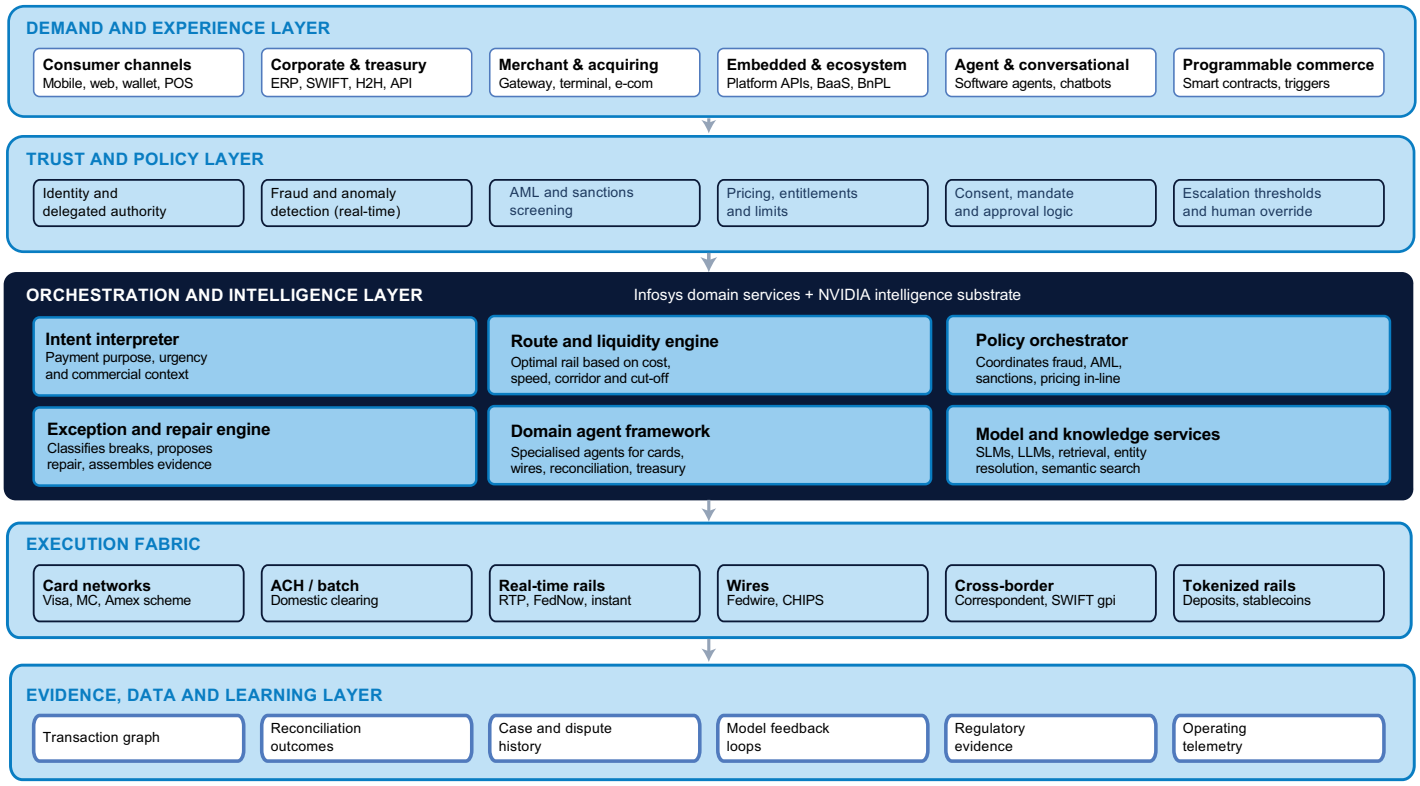
At the centre of this model sits an enterprise policy and routing layer. It decides how money should move based on customer context, commercial purpose, time sensitivity, liquidity position, pricing, risk posture and counterparty readiness. Beneath it sits an event and evidence fabric that supports operations, finance, compliance and AI models simultaneously. Around it sit domain agents that work inside governed workflows rather than outside them.

What changes in the operating model

From	To	Why it matters
Product-specific operating towers	Enterprise money-movement control tower with domain views	One place to see service levels, exceptions, exposures and policy execution
Integration-heavy data plumbing	Reusable event and evidence fabric	AI, control, finance and servicing rely on the same truth set
Manual evidence assembly	Knowledge services and model-assisted investigation workflows	Faster case handling and better explainability
One modernisation programme per rail	Continuous renewal pipeline with intent extraction and phased change	Lower future change cost and less disruption
Opaque automation experiments	Governed SLM/LLM stack with deterministic fallbacks	Higher confidence and easier regulatory conversations

Cards and payments: layered enterprise architecture

How cards, non-card rails, treasury and new money forms share a common control, orchestration and evidence fabric



Cards and payments layered enterprise architecture: five enterprise planes from demand and experience through to evidence and learning, with Infosys domain services and NVIDIA intelligence at the orchestration core.

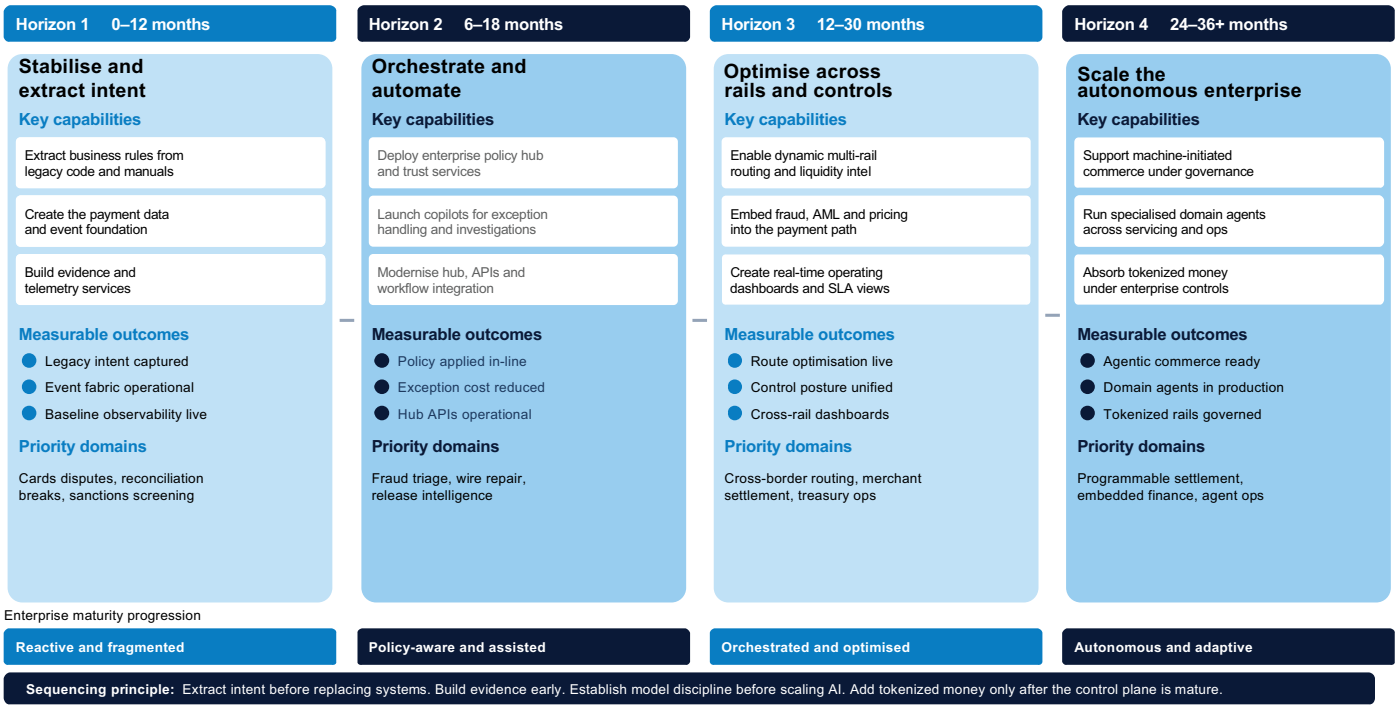
A pragmatic renewal roadmap

Institutions do not need to rebuild everything at once. The most practical path is to pick high-friction domains where service-level improvement, lower operating drag and stronger controls can be proved quickly: investigations, release intelligence, reconciliations, fraud servicing, disputes, merchant operations and multi-rail status explainability all fit this pattern.

Sequencing matters. Extract business intent before replacing critical systems. Build the event and evidence fabric early. Stand up the model development and evaluation discipline before scaling language-model use cases. Add tokenized-money experiments only after the enterprise control plane, liquidity view and accounting treatment are mature enough to absorb them.

Renewal roadmap: from legacy estate to autonomous enterprise

A sequenced journey through four horizons — each building on the discipline of the previous stage



Renewal roadmap: four horizons from legacy intent extraction through orchestration and multi-rail optimisation to an autonomous, adaptive payments enterprise - with measurable outcomes and priority domains at each stage.

01 Define the enterprise target state for money movement rather than funding isolated platform programmes.

02 Choose two or three domains where service-level and exception improvements can be demonstrated within one budget cycle.

03 Launch an intent-extraction effort across legacy rules, manuals, tickets and operations knowledge.

04 Stand up the payments model-development discipline: corpora, benchmarks, evaluation and governance.

05 Create a tokenized-money guardrail pack covering legal, risk, liquidity, accounting and operational design.

Closing view

The institution that wins in payments will not be the one with the newest rail in isolation. It will be the one that can orchestrate cards and non-card flows, fiat and tokenized forms of money, humans and agents, controls and economics, inside one trusted enterprise model.

That is the real opportunity behind the shift from rails to intelligence. Payments is no longer just a processing problem. It is an enterprise cognition problem. The banks that solve it well will reduce complexity, improve service quality, strengthen control, and create the strategic freedom to adapt as the market changes. Those that delay will find themselves paying a compounding complexity tax while competitors move faster, serve clients better and absorb new money forms with less friction.

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