OvationCXM

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HOW TO WRAP YOUR BANKING APIs WITH MCP

A field guide to turn existing banking systems into governed, AI agent-ready capabilities.



www.ovationcxm.ai

Core Principles of Banking API Wrapper Design via MCP

Expose discrete tasks, not full application programming interfaces (APIs): Model Context Protocol (MCP) publishes which tools are available, while governance dictates whether a call proceeds.

This field guide will cover:

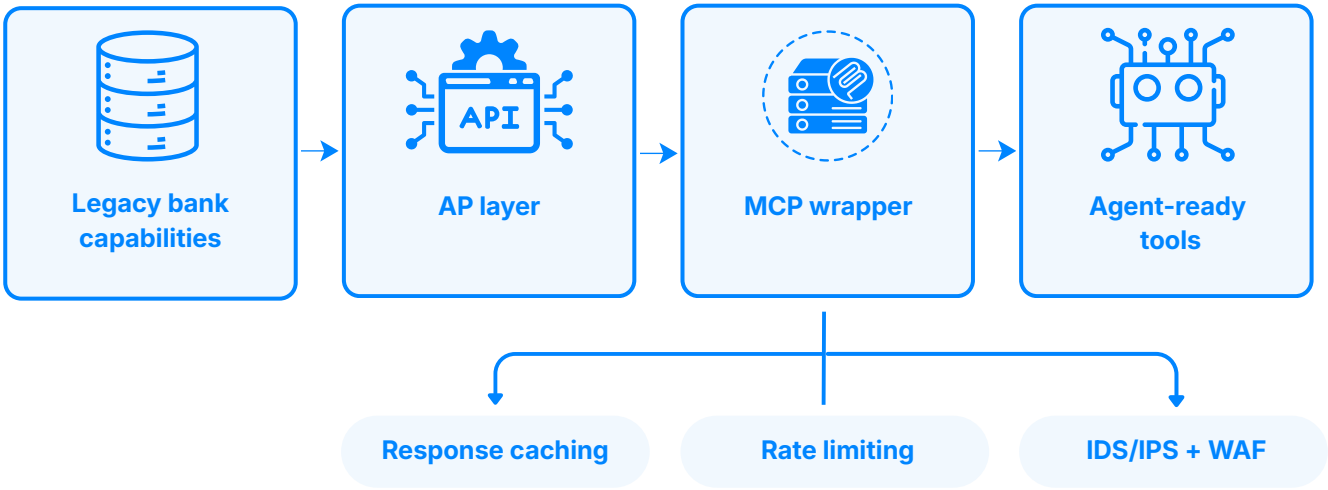
	**Why Wrap Banking APIs:** Legacy bank systems were built for humans or static integrations, not autonomous artificial intelligence (AI) agents.
	**What MCP Delivers:** A standardized, governed task catalog rather than an uncurated dump of raw API schemas.
	**How to Structure Tools:** Organize capabilities around real user journeys and guard them with non-skippable security controls.
	**When to Publish Capabilities:** Evaluate backend readiness first, sorting endpoints into ready, needs adapter or human-gated.
	**Where Identity Is Managed:** Reuse existing, bank-trusted OAuth and authentication infrastructure instead of custom security paths.
	**Who Controls Execution:** Deterministic guardrails and identity policies dictate what actions an agent can read or write.

01

From Static Legacy APIs to Agent-Ready Tools

AI needs structured access to move from understanding data to acting. While traditional bank APIs expose core data like balances and transaction histories, their coverage is inconsistent and their interfaces were never designed for autonomous agents. Human-operated portals, file and SWIFT drops and fragmented REST endpoints were not built to serve as an AI task catalog.

Wrapping banking APIs with MCP establishes a standardized, governed interface. Instead of forcing agents to reverse-engineer Swagger files or scrape screens, an MCP wrapper exposes bounded, callable services such as pulling statements or initiating payments. This ensures AI agents operate in a controlled, predictable environment while enabling seamless interaction with core financial systems. In addition to governance, the wrapper layer enables practical protections such as response caching for read-heavy tools and rate limiting to absorb agent-driven traffic spikes. It also integrates with existing IDS/IPS or WAF controls, shielding core banking systems from unpredictable agent activity without requiring changes to legacy APIs.



02

Structuring MCP: Curation Over API Exposure

While an API defines programmatic system access, MCP standardizes how curated, bounded capabilities are exposed to AI agents as discoverable tasks with explicit authorization boundaries. Sitting above the integration layer, MCP neither replaces API gateways nor makes legacy architecture programmable on its own. Instead, it serves as an agent task layer: capabilities flow from core systems through the API layer, are curated into specific business tools with defined guardrails and are finally exposed to the agent. Rather than granting unrestricted API access, organizations should expose curated tasks such as checking payment status, retrieving rejection codes or opening a support ticket.

Organize these tasks around user workflows and protect them with a clear control envelope. Every workflow must define required steps, mandatory verification evidence and non-skippable guardrails, while giving agents appropriate discretion within those bounds. To ensure high usability, tools should be organized by operational functions such as reading data, servicing accounts or initiating payments rather than mirrored directly from legacy open API definitions. Each catalog entry should include intuitive names, brief descriptions, sample prompts, setup guidance and a sandbox-first configuration.

A practical control pattern: before, during and after

- **Before the action:** validate the actor, customer, account, tool, parameters, limits and required approvals.
- **During execution:** enforce valid workflow state, handle retries and timeouts, prevent duplicates and stop or escalate when execution departs from the expected path.
- **After the response:** confirm what the downstream system actually did and trigger remediation when the outcome differs from the intent.



CRITICAL GUARDRAIL

Avoid exposing raw or ungoverned API endpoints, granting write permissions prematurely or deploying agent tools without predefined workflow guardrails.

03

Aligning MCP Authentication with Banking Identity Infrastructure

The MCP wrapper should leverage existing bank-trusted identity, credential and permission frameworks rather than introducing bespoke authentication mechanisms. Remote MCP deployments should utilize standards-based OAuth tailored to the caller: interactive user flows typically require Authorization Code Flow with Proof Key for Code Exchange (PKCE), whereas machine-to-machine or autonomous enterprise agent scenarios should employ approved OAuth client credentials or assertion patterns. The MCP endpoint must strictly validate resource-specific tokens, ensuring the bank's core identity provider remains the single source of truth. While many institutions will prefer to retain existing certificate-based mutual Transport Layer Security (mTLS) controls for high-risk flows, the agent paradigm benefits from complementary lightweight delegation patterns (such as scoped OAuth assertions) paired with Human-in-the-Loop (HITL) approval as a compensating control.

Agents must never pass authentication tokens directly to upstream or core banking services without an explicit delegation pattern. Instead, the wrapper validates incoming agent requests and re-authenticates upstream using bank-approved mechanisms, whether tightly scoped OAuth credentials, existing mTLS identities or both, as mandated by the official MCP specification.

Production environments will face a practical tension between static, long-lived shared secrets (easiest for agent adoption) and rigid third-party signed mTLS certificates (difficult to obtain and manage at scale). In either case, native HITL approval workflows serve as a strong compensating control, allowing institutions to start with simpler credential models while still enforcing oversight on higher-risk actions.



CRITICAL GUARDRAIL

Avoid issuing reusable bank credentials, static shared secrets or long-lived tokens to client-owned agents operating outside the governed MCP path.

04

A Phased Deployment Strategy: Read-Only First, Write Capabilities Second

Implementation should begin with a single, high-value read-only task that can be easily validated against core systems of record. For example, a query tool like "Get Payment Status" carries a fundamentally lower risk profile than an execution tool like "Release Payment." Teams should map existing access pathways, stripping the interface down to the absolute minimum inputs, outputs and permission scopes required for the agent to complete the task.

Before introducing write operations, validate both permitted and denied paths under real-world conditions. Logs demonstrating blocked requests serve as critical proof that safety controls and boundaries are functioning as designed, not as system noise. When introducing write capabilities, implementations must rigorously validate inputs, prevent accidental duplicate submissions and return deterministic execution feedback. Where possible, design these capabilities as version-controlled or rollback-capable actions so agents can recognize them as lower-risk operations, knowing they are paired with native HITL approval. High-risk actions like money movement should remain gated until institutional entitlements, transaction limits, dual-control mechanisms and HITL approval workflows are fully integrated.

CRITICAL GUARDRAIL

Avoid bundling risky write actions (like moving money) into the same permission scope as simple read-only tasks (like checking balances).

05

Separating Interface Discovery from Know Your Agent (KYA)

While MCP exposes which tools exist and how to invoke them, it does not provide "Know Your Agent" (KYA) governance. Authorization and risk decisions must remain strictly external to the AI model, managed by deterministic security policies.

True agentic control requires an Agentic Transaction Control Layer (ATCL) sitting in front of tool execution. While MCP handles interface discovery, the ATCL handles core compliance: registering and fingerprinting agents, mapping ownership of agents back to their human counterparts, enforcing workflow rules, logging denials and revoking access instantly.

CRITICAL GUARDRAIL

Avoid treating the deployment of an MCP wrapper as a complete AI governance and security solution.

06

Critical Deployment Anti-Patterns

Design & Architecture

1-to-1 REST Mapping: Wrapping REST routes individually instead of publishing curated, intent-driven business tasks.

Brittle Automation: Treating screen-scraping workarounds or UI hacks as formal API tools.

Ungoverned Tasks: Releasing standalone tools without defining structured journey steps around them.

Monolithic Tools: Overly broad tools handling multiple capabilities instead of smaller, scoped ones.

Non-deterministic Contracts: Tools lacking clear schemas and deterministic success/failure semantics.

Identity & Access Security

Direct Token Passthrough: Passing raw agent authentication tokens directly through to core banking systems without governed delegation.

Anonymous Execution: Operating calling agents without registering them to a verified, accountable human owner.

Over-Privileged Scopes: Combining documentation-only tools with transactional money-movement capabilities under a shared credential.

Environment Bleed: Reusing testing or sandbox API keys within production environments.

Governance & Controls

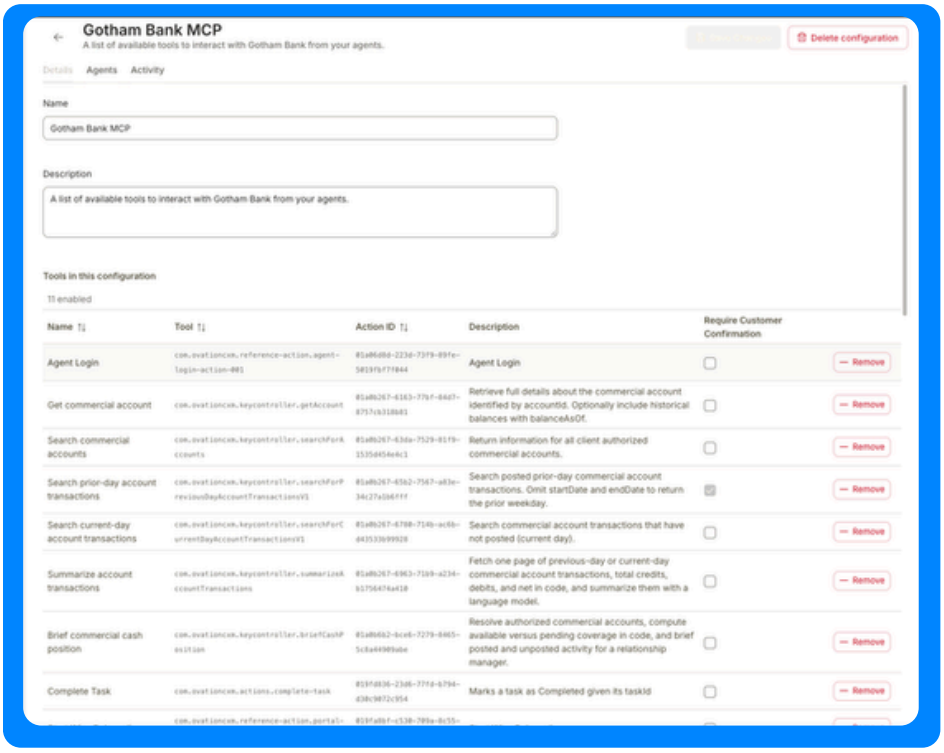
Silent Failures: Skipping deny logs and failing to audit blocked execution attempts.

Premature Write Exposure: Unlocking higher-risk write tools before institutional entitlements, transaction limits, approval checks and dual-control requirements are fully established.

07

Catalog Publication and the Role of OvationCXM

Where native APIs don't yet exist, institutions can deploy a bank-controlled intermediary or purpose-built agent portal to support bounded tasks while building durable machine interfaces. While third-party authentication helps verify caller identity, it does not inherently make legacy infrastructure programmatically accessible and human portal automation should never serve as a permanent control boundary for high-risk capabilities. By leveraging dedicated implementation expertise and specialized partners, financial institutions can build or wrap remaining integrations, so the task catalog and its governance framework launch simultaneously.



OvationCXM MCP configurator: one configuration, three enabled tools with stable action IDs and HITL controls.

When publishing the catalog, organizations should issue an explicit, named configuration that defines active tools and assigns a stable action identifier (ID) and HITL configuration to each approved capability. Unapproved endpoints must be strictly omitted. Every task should operate within a governed customer journey, thereby enforcing mandatory steps, non-skippable compliance controls and explicit authorization bounds, while granting agent autonomy only where the business workflow permits.

Beyond supporting transactional execution, ATCL provides governance across broader customer experience processes. This allows individual MCP actions to operate within unified, multi-touchpoint journeys, including digital onboarding and account servicing. Consolidating these workflows under one control layer reduces parallel integration requirements and enables institutions to deliver a coherent, governed Agent Experience (AX) across transactional and servicing domains.

OvationCXM

The orchestration system for agentic banking

Schedule an MCP and ATCL briefing at schedule.ovationcxm.ai

OvationCXM provides the orchestration operating system for financial services. Its CXMEngine platform connects systems, data, teams and ecosystem partners to coordinate complex customer and operational workflows without requiring institutions to replace existing technology. OvationCXM's Agentic Transaction Control Layer (ATCL) extends that orchestration to client-facing AI agents, enabling institutions to register, authenticate and permission incoming agents and coordinate their approved activity across systems, workflows, partners and human approvals. Learn more about OvationCXM at www.ovationcxm.ai.