

BANKING, IN FULL SIGHT

Conspectus

Brand narrative · Platform overview · Technical architecture

Conspectus is a full-stack, AI-governed core banking platform.
This document covers the brand narrative, platform capabilities,
AI governance model, and technical architecture.

CONTENTS

Brand Narrative	3
The Platform	5
For Banking Groups	8
Risk-Based Pricing & IFRS 9	9
AI Governance	10
Platform Architecture	12
Security & Data Protection	13
Deployment Options	14
Technical FAQ	15

Brand Narrative

The high ground

There is a moment, described identically by Sun Tzu and every great commander since, that precedes every decisive action: the moment when one side can see the whole field and the other cannot.

Sun Tzu called it foreknowledge. The Romans had a word for the act itself: *conspectus* — the comprehensive survey, the single commanding view, the reading of the whole situation at once. It is what separates the leader who commands events from the one who is managed by them.

Your bank may not have this. And that can be a problem.

It is not that your people are incompetent. It is that they cannot see. Your lending system holds one version of a customer's truth. Your treasury holds another. Your accounting assembles a third, weeks after the events that generated it. Your CFO makes decisions about capital allocation from a picture that is already out of date by the time it lands on the desk.

Peter Drucker, writing in 1959, predicted exactly this. He named the century's central management failure: placing people with sophisticated analytical capability in environments where they cannot apply it — because the information they need exists, but cannot be seen. Not because it is secret. Because it is scattered.

Conspectus was built to end that.

It is a full-stack core banking system — lending, deposits, treasury, accounting, operations, IFRS 9, payments, and AI-governed decision support — unified under a single data model. Not a suite of products that happen to share a vendor. One platform. One source of truth. Every part of the institution visible from the same place.

The picture expands further for banking groups operating across multiple jurisdictions. Conspectus is architected from the ground up for multi-entity, multi-language, multi-currency operation. Every subsidiary runs its own fully operational instance. The Group Head Office sees all of them as one — consolidated, real-time, without assembly.

For groups straddling multiple regulatory regimes, Conspectus eliminates one of the most costly and error-prone exercises in banking: the production of financial statements under two standards simultaneously. The same transaction is recognised under IFRS and local GAAP in a single posting. Your CFO receives the IFRS financials. The regulator receives the local returns. Nobody reconciles anything.

Underlying everything is a built-in data warehouse — not a reporting layer bolted on at the end, but an architectural component designed from day one to serve analytical workloads without touching the live ledger. When your board asks how the institution is performing, the answer does not need to be assembled. It exists.

"When you open a credit file, you see the borrower's complete deposit history, treasury exposure, existing facilities, and live IFRS 9 staging — in the same screen, at the same moment, from the same data. That is the conspectus. The high ground. The whole field, finally in view."

Most core banking implementations ask the same silent question of every client: how much of what you do can you fit into our template? The answer, over time, is: less than you hoped. Conspectus inverts this entirely. You describe your bank — your credit workflow, your delegation of authority, your product logic, your IFRS 9 staging criteria — and the platform configures to match.

Conspectus is not for every bank. It is for the institution that has decided the cost of not seeing clearly is higher than the cost of transformation. For the bank that is ready to stop managing systems and start leading an institution.

Conspectus. Banking, in full sight.

The Platform

One platform. Every dimension of the institution.

Conspectus is a full-stack core banking system. Every module below shares the same database, the same customer record, the same ledger. There is no synchronisation. There is no nightly batch to reconcile systems. There is one truth.

Lending Origination, underwriting, servicing, recovery	Deposits & Cards Accounts, payments, cards, wallets	Treasury Liquidity, FX, nostro/vostro, term deposits	Accounting GL, period close, financial statements
IFRS 9 / ECL Live staging, risk-based pricing	Compliance & Risk Oversight from the same data layer	Internal Audit Built on the same foundation	HR & Procurement Cost, budgets, payroll controls

Lending

The origination workflow progresses through three structured stages. Stage 1 captures identity, KYC, and preliminary risk assessment. Stage 2 covers underwriting, document review, and credit committee. Stage 3 handles contract execution and disbursement. AI agents assist at every stage — reviewing documents, generating underwriting narratives, assessing IFRS 9 impact — under governance rules the bank defines. Active loans move into a real-time servicing portfolio, with a dedicated recovery centre for collections.

Area	Capability
Loan Applications	End-to-end origination — KYC, income, collateral, AI decision support
Loan Servicing	Active portfolio with 360° facility view, schedules and event history
Recovery Centre	Work queues by delinquency stage, collection batches, legal pipeline
Stage 3 Portal	Contract execution and customer-facing disbursement gate

Customer Accounts & Payments

A complete deposit banking capability — current and savings accounts, time deposits, cards, domestic and SEPA payments — fully integrated with the lending record and general ledger. Staff see the complete customer picture. Customers manage their accounts through dedicated web and mobile banking channels, with strong customer authentication on high-value payments.

Area	Capability
------	------------

Account Portfolio	Current, savings, and TD accounts with live balances
Transfers & Payments	Internal, domestic (AIPS/AECH), SEPA/international
Cards	Debit and credit card contracts, block/unblock, authorisation
Customer 360	KYC, accounts, loans, exposure in one staff view

Treasury

A liquidity management centre covering nostro and vostro accounts, FX exposure, term deposit placements, forecasting, and limit monitoring — all on the same data as the loan portfolio and accounting layer. Treasury positions are live, not assembled from a separate system.

Accounting & Finance

A full general ledger with configurable accounting schemes — business events trigger postings automatically, without manual journal entries for routine activity. Period close, working day close, fixed assets, and financial statement generation are built-in. The IFRS 9 / ECL module provides live credit staging, expected credit loss calculation, and portfolio participation management.

Digital Banking Channels

Customers access their accounts through a white-label web banking portal and a React Native mobile application. The web channel supports QR-code login approved from the mobile device. The mobile app handles KYC enrollment with face biometrics and serves as the strong authentication device for web sessions and large payments. Both channels operate under separate authenticated sessions from the staff application, with distinct rate limits and audit trails.

For Banking Groups

The conspectus of an entire group

Banking groups face a compounded version of the visibility problem. Each subsidiary is a separate institution, with its own regulation, its own accounting standards, its own currency and language. The Group Head Office sees each of them through reports assembled by people who assembled them from other reports.

Conspectus resolves this structurally. Every subsidiary runs its own fully operational instance. The Group Head Office sees all of them as one.

Capability	What it means
Multi-language	Every subsidiary operates in its own language. Workflows, documents and regulatory outputs are localised natively.
Multi-currency	Accounts, treasury, nostro/vostro and term deposits operate natively across currencies. FX exposure monitored centrally.
Multi-entity	Each entity is a fully isolated tenant. Group directives flow down; subsidiary results flow up automatically.
Dual accounting standards	The same transaction is recognised under IFRS and local GAAP simultaneously. One posting. Two outputs. No reconciliation.
Real-time consolidation	The Group CEO reads a consolidated position in real time — not assembled at month-end.

Risk-Based Pricing & IFRS 9

The first core banking system to price risk live

Every bank knows that the rate on a loan should reflect the risk of that loan. In practice, the pricing decision and the risk assessment are separated — by systems, by teams, by time. A rate table is agreed quarterly. Individual exposures are assessed annually, or when something goes wrong.

Conspectus eliminates this gap. The moment a facility is being structured, the system generates an IFRS 9 Expected Credit Loss estimate for that specific borrower, at that specific point in time, incorporating the borrower's full profile, the proposed facility terms, and the existing portfolio composition. That ECL feeds directly into the pricing recommendation surfaced to the relationship manager.

Your relationship manager sees not what a static table suggests the rate should be — but what the actual risk requires it to be. One mechanism. One logic. Every exposure, every time.

Risk Control	How it works
PD hard limit	Maximum permitted probability of default — non-bypassable system setting
DTI ratio cap	Maximum debt-to-income ratio enforced at origination
Maximum facility size	Single-loan exposure ceiling
Maximum customer exposure	Concentration limit per borrower across all facilities
IFRS 9 staging	Live Stage 1/2/3 classification feeding ECL and pricing

AI Governance

Governed precisely as you determine

The AI in Conspectus is not a feature. It is the platform's nervous system — built in from the beginning, present at every process, every workflow, every decision point. Every agent operates under a mandate the bank defines.

01	02	03	04
Human-only	AI-assisted	Criteria-based	AI-full
Agents observe and surface information. Staff perform every step unaided.	Agent drafts a recommendation. A human reviews and approves before any action.	Agents handle defined cases autonomously. Edge cases route to staff automatically.	Agent acts within policy limits, logs reasoning, and notifies. Full escalation built in.

"Every action an agent takes — every recommendation, every routing, every decision — is written down, timestamped, and readable. The reasoning is the record."

What AI does in daily banking operations

Area	What the agent does
Loan origination	Document review and underwriting narratives with explainable AI output; routing to human when policy requires
Credit pricing	IFRS 9 ECL computation at origination to inform risk-based rate recommendations
Dashboard	Optional AI executive narrative summarising portfolio KPIs in plain language
Audit trail	Every agent decision logged with agent identity, confidence score and full reasoning chain

What AI cannot do

No agent can bypass the non-bypassable. Credit limits, KYC gates, strong customer authentication, and disbursement controls are encoded in the system — not in policy documents. An agent with full autonomy cannot book a loan above the PD hard limit. It cannot disburse to a customer who has not completed KYC. It cannot override the SCA step-up for large payments. These constraints apply regardless of agent

confidence score.

Platform Architecture

Built for production banking environments

Every request Conspectus processes passes through the same layered architecture: client → API → authentication → role check → risk gate → domain logic → database. Financial mutations are immutable events. Balances are derived, not edited. The audit trail is not a report — it is the database.

Defence in depth — security layers

Layer	Protection
TLS / network	Encrypted transport; all traffic HTTPS in production
Channel isolation	Staff and customer channels are separate authenticated contexts with distinct CORS origins
Authentication	Staff: JWT via username/password. Customer: face biometrics + mobile-approved web sessions
RBAC	Role-based permissions enforced at API route level — not UI filter
Module guards	Features enabled per tenant; data scoped by tenant_id at every layer
Customer SCA	PSD2-style step-up for high-value or new-payee payments
Risk limits	Non-bypassable PD, DTI, and exposure caps in system config
AI policy gates	Every agent action must pass policy_gate_assert_allowed before financial effect
Idempotency	Mandatory Idempotency-Key on all financial POSTs prevents double-processing
Rate limiting	Financial mutation paths rate-limited; 429 on breach
Audit surfaces	business_events, agent_actions, permission_audit_log, customer_banking_audit
Operational controls	Session revocation, digital banking block/unblock, refresh token rotation

Security & Data Protection

Encryption, identity, and integrity

Data	Protection method
Staff passwords	bcrypt — 12 rounds — never stored in recoverable form
Staff access tokens	Short-lived JWT (HS256) — not stored server-side
Customer refresh tokens	SHA-256 hash stored; raw token returned once to client
API / agent keys	Constant-time comparison; scoped to agent use
Database encryption	Platform responsibility — PostgreSQL TDE or volume encryption recommended
JWT key rotation	JWT_PREVIOUS_SECRET_KEYS allows zero-downtime key rollover
Production safeguards	Startup refuses if default secrets or wildcard CORS are detected

Audit trail surfaces

Surface	What it captures
business_events	Every financial mutation — append-only, timestamped, idempotency-keyed
agent_actions	Every AI decision with confidence score and reasoning chain
permission_audit_log	Every staff permission grant, revocation and role change
customer_banking_audit	Login events, SCA outcomes, payments, session activity

Deployment Options

Your infrastructure. Your choice.

Conspectus is cloud-neutral. It runs as standard Linux containers (Docker / Kubernetes) with PostgreSQL as the system of record. You choose where it lives based on your data residency requirements, regulatory obligations, and IT environment.

Model	What it means
On-premises	API containers on VM or Kubernetes; PostgreSQL on dedicated hardware; full control over hardware and network; no cloud dependency
Private cloud	Bank-owned VPC on AWS, Azure, or GCP; private subnets; managed backups; no public database endpoint
Hybrid	PostgreSQL on-premises; stateless API tier in cloud for burst capacity and gradual migration; private link between tiers
Multi-tenant SaaS	Single Conspectus deployment for multiple institutions; full tenant isolation by design; contractual and network isolation are deployment choices

Technology stack

Layer	Technology
Backend API	Python 3, FastAPI, SQLAlchemy (async), Alembic migrations
Database	PostgreSQL 16 — OLTP system of record
Analytics	DuckDB / Parquet data warehouse (ETL from OLTP; read-only for analytical workloads)
Staff UI	React 19, TypeScript, Vite, Tailwind CSS
Customer web	React, Vite — separate origin per tenant
Customer mobile	React Native / Expo — iOS and Android
Authentication	JWT (HS256), bcrypt, refresh token hashing
AI layer	LLM-agnostic: OpenAI, DeepSeek, or self-hosted Ollama
Observability	Prometheus metrics, structlog structured logging, X-Request-ID tracing

Technical FAQ

What your CIO will want to know

Where does data live, and how is each entity isolated?

Every record carries a `tenant_id`. Every authenticated session carries the same identifier in its token, so all queries are automatically scoped. Group entities each run their own instance; consolidation is assembled from those instances in real time, not by mixing records in a shared table.

Can the AI modify balances or override credit limits?

No. AI agents are subject to the same policy gate as human operators. Hard risk limits (PD cap, DTI ratio, single-facility maximum, concentration limit) are non-bypassable system configuration. They apply regardless of who or what initiates the transaction, and regardless of agent confidence score. Analytical agents read from a separate read-only data warehouse — they have no write path to the live ledger.

How does authentication work for staff and customers?

Staff authenticate via username and password (bcrypt, 12 rounds), receiving a short-lived JWT. Customer mobile users enroll with KYC and face biometrics; web customers approve sessions via QR code from their mobile app — no password on the web channel. High-value payments trigger PSD2-style strong customer authentication as a mandatory second factor.

How does the system prevent double-processing on retries?

All financial POST/PUT operations require an Idempotency-Key header (client-generated UUID). The system stores this key against the business event. If the same key is submitted again, the original result is returned with no additional effect. This is enforced in middleware and is not optional on financial mutation paths.

How does Conspectus scale?

The API tier is stateless and horizontally scalable behind a standard load balancer. PostgreSQL scales vertically first; read replicas can offload reporting. The analytical data warehouse (DuckDB/Parquet) is separated from the OLTP ledger — heavy queries do not contend with live transactions. Prometheus metrics and `/health` endpoints are built in for SLO monitoring.

Can Conspectus run entirely on-premises with no cloud dependency?

Yes. The platform is cloud-neutral. It runs as standard containers with PostgreSQL on dedicated hardware. The AI layer can be served by a self-hosted Ollama instance — no external LLM API call required. The only outbound dependency in a fully air-gapped deployment is the LLM model you choose to run locally.

Conspectus — Banking, in full sight

conspectus.finance