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BFSI Modernization

Data-Driven | Compliant | Scalable.

5 Modernization Levers Every Bank Needs to Upgrade Its Tech Stack for Real-Time Decisions, Risk Management, and Customer Experience.

Introduction

Why Legacy BFSI Stacks Slow Decisions, Compliance, and Customer Experience

Banks operate in a landscape defined by rising fraud, faster payment rails, evolving regulations, and customer expectations shaped by digital-native experiences. Yet many institutions still depend on:

- Monolithic cores
- Batch-based processing
- Siloed data marts
- Manual compliance workflows

This creates predictable problems:

Slow decisions

Loan approvals, fraud checks, and payment reconciliations get delayed by multi-hour or overnight batch jobs.

Compliance blind spots

Fragmented data slows AML, KYC, and transaction monitoring, resulting in reactive—not proactive—compliance.

Poor customer experience

Onboarding takes days, product launches are slow, and personalization is nearly impossible on fragmented systems.

Modern BFSI requires real-time decisioning, composable architecture, and integrated data — which legacy systems cannot support.

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Shift 1

Core Flexibility — Decouple the Monolith and Modernize Without Replacing the Core

Legacy reality

Most banks run tightly coupled cores where deposit management, lending, payments, customer records, and ledgers are intertwined. Any enhancement risks system instability.

Modern Approach:
Build A Modular Orchestration Layer

API-First Modernization

Expose core functions through APIs to connect with digital channels, credit engines, fraud engines, and partner ecosystems.

Domain-Based Microservices

Break down onboarding, lending, KYC, servicing, and payments into independent services that evolve without touching the core.

Unified Visibility

Customer interactions, risk indicators, and payment events flow through a central orchestration layer rather than scattered systems.

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Entrans POV

We use a structured "wrap and extend" model that preserves stability while modernizing high-impact areas like onboarding, lending, and payments — without a risky full core replacement.

Entrans Success Story

Mid-size retail bank – Payments + Deposits Modernization

We built an API gateway and microservices layer around the bank's legacy deposits engine, enabling real-time payment flows and unified customer visibility.

Outcome

Settlement delays reduced by ~80%, new digital payment products delivered in 6–8 weeks.

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Shift 2

Real-Time Data Pipelines — End Batch Processing and Unlock Instant Risk & Compliance Insight

Legacy reality

Risk, AML, and compliance teams often work with data that is 12–48 hours old due to batch ingestion.

Modern Approach:
Real-Time, Event-Driven Data Pipelines

Streaming Ingestion

Real-time streams capture transactions, onboarding events, session behavior, document verification, and payment anomalies.

Automated Triggers

Examples:

- A suspicious transaction generates an immediate AML flag
- Large deviations trigger instant fraud checks
- Credit applications update risk models continuously

Unified Data Layer

A cloud-based platform consolidates risk, customer journey, compliance, and fraud data into one high-quality, governed structure.

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Entrans POV

We implement event-driven backbones that reduce downstream latency from days to minutes, allowing risk and compliance actions in real time.

Entrans Success Story

Digital-first bank – AML monitoring modernization

We replaced batch-driven AML ingestion with real-time streaming and rule-based triggers.

Outcome

Alert latency dropped ~95%, operational backlog reduced significantly.

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Shift 3

AI + Automated Risk Management — Predictive Compliance and Intelligent Decisioning

Legacy reality

Legacy risk & compliance engines depend heavily on: Hard-coded rules, Manual investigations, Static scoring models, High false positives. This slows approvals and increases exposure.

Modern Approach:
AI-Driven And Automated Risk Operations

Predictive Credit Scoring

Models evaluate customer behavior, income patterns, credit history, and multiple risk attributes together.

AI-driven Fraud Detection

Real-time anomaly detection learns from transaction behavior.

Automated Exception Management

Bots triage AML alerts, verify contextual data, and close low-risk cases autonomously.

Closed-Loop Learning

Models improve based on investigator decisions over time.

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Entrans POV

We combine supervised ML models with rule-based systems to reduce manual workload while improving detection accuracy.

Entrans Success Story

Universal bank – Credit + AML transformation

AI-driven risk models and automated AML alert triage improved credit turnaround times and significantly reduced compliance backlog.

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Shift 4

Modern Platforms — From Mainframe and On-Prem to Cloud-Native Banking Intelligence

Legacy reality

Banks often run: Mainframes or AS/400, On-prem KYC/AML tools, Siloed analytics, Fragmented reporting modules. These limit integration and hinder resilience.

Modern Approach:

Cloud-Native Migration

High-availability cloud environments support regulatory workloads and continuous operations.

Hybrid Coexistence

Expose mainframe/legacy data via APIs to modern digital layers.

Embedded intelligence

Modern compliance and fraud products provide real-time dashboards and AI-driven detection out-of-the-box.

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Entrans POV

We implement phased journeys: Expose → Augment → Migrate → Optimize. Core replacement is never step one.

Entrans Success Story

Large APAC bank – Risk & Compliance modernization

We modernized AML and fraud engines onto cloud-native architectures while keeping the core banking engine on-prem.

Outcome

Major improvement in detection performance and operational uptime.

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Outcomes — Real Results From Real Modernization

Across BFSI modernization engagements, banks typically see:

Modernization Outcomes:

- Dramatic reduction in decision latency
- Significant reduction in fraud & AML backlog
- Faster loan approvals and onboarding
- Reduction in manual compliance effort
- Better customer experience driven by faster processes
- Lower infrastructure costs through cloud migration
- Increased regulatory confidence through improved controls

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