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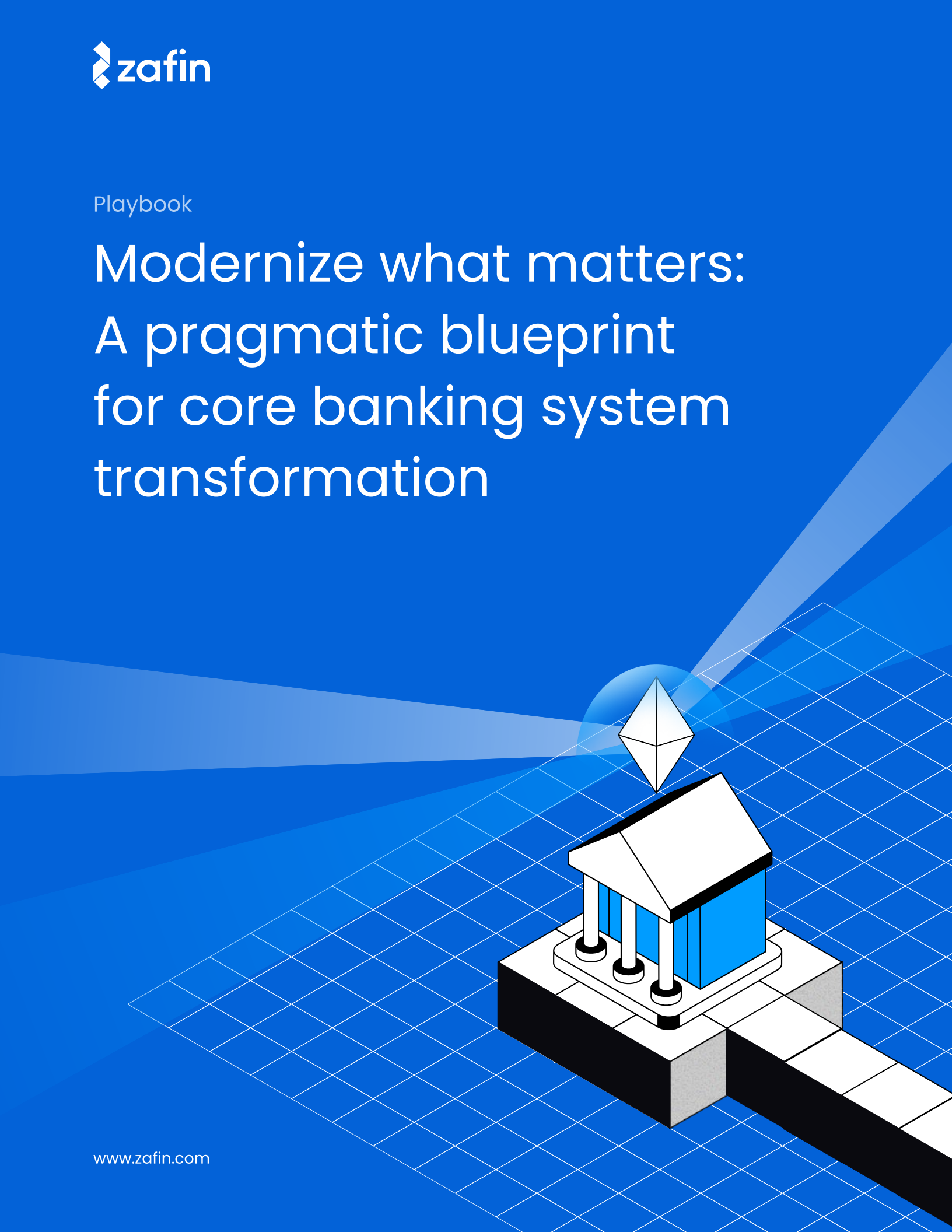
Playbook

Modernize what matters: A pragmatic blueprint for core banking system transformation



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A note from our CPTO

Banking is one of the world's most demanding engineering problems. It asks us to deliver trust on a planetary scale, with precision down to the cent and millisecond. For decades, legacy core systems have done that job admirably. They still do it. What's changed is everything around them: customer expectations, regulatory scrutiny, the speed of competition, and the reality that value is now created across ecosystems, not just within a bank's four walls.

As Chief Product & Technology Officer at Zafin, I spend my time with leaders who feel that pressure every day. They're not looking for slogans or a risky "big bang." They're looking for a pragmatic way to move fast without breaking what works. That is why this playbook exists, and why we call it **modernize what matters**.

Modernization isn't about dismantling the core that safeguards your ledger. It's about decoupling the capabilities that drive growth and customer relevance—product, pricing, billing, agreements, and disclosures—so they can evolve at the speed of your business. It's about turning the core back into what it was always meant to be: a stable, resilient ledger, surrounded by an AI-powered architecture that is agile, governed, and interoperable.

You'll see that philosophy throughout these pages. If there's a single idea I hope you take from this book, it's that modernization can be measured in months, then scaled in waves. Start where impact is highest and risk is lowest—often pricing, billing, or disclosure governance. Prove it. Then repeat. Each externalized capability reduces dependency on the core, lowers regression risk, and expands your capacity to innovate. That's how banks we work with have moved from sporadic releases to continuous delivery of market-relevant propositions, without compromising resilience.

A word on AI. In our world, AI isn't a demo; it's part of the control plane. It helps detect revenue leakage, automate disclosure accuracy, optimize pricing strategies, and provide audit-ready telemetry across the product and customer value lifecycle. AI is valuable not because it's new, but because it makes modernization safer and faster.

This is also a book about alignment. The most successful programs we see are co-owned by business, technology, risk, and compliance. They share a roadmap, metrics, and a cadence for decisions. They use coexistence deliberately, with clear go/no-go checkpoints and traceability from policy to product to customer outcome. In other words, they treat modernization as an enterprise capability, not an IT project.

What should you expect as you read?

- A **blueprint** you can apply immediately: frameworks, integration models, and reference patterns that reflect how banks actually operate.
- **Stories** from institutions already delivering outcomes: faster launches, reduced mainframe load, stronger customer relevance, and improved transparency.
- A **pathway** from strategy to execution: how to pick your starting point, structure phases, and scale with confidence.

The future-ready bank is not hypothetical. It's the one that externalizes what matters, orchestrates across ecosystems, and proves value step by step. You don't have to rip and replace to get there. You have to decouple, govern, integrate, and accelerate.

My invitation is simple: use this eBook to align your teams, choose a focused starting point, and take the next right step. Modernization is already underway across the industry. The question is how quickly, and how safely, you'll turn it into a competitive advantage.

Let's modernize what matters.

Shahir Daya
Chief Product & Technology Officer, Zafin

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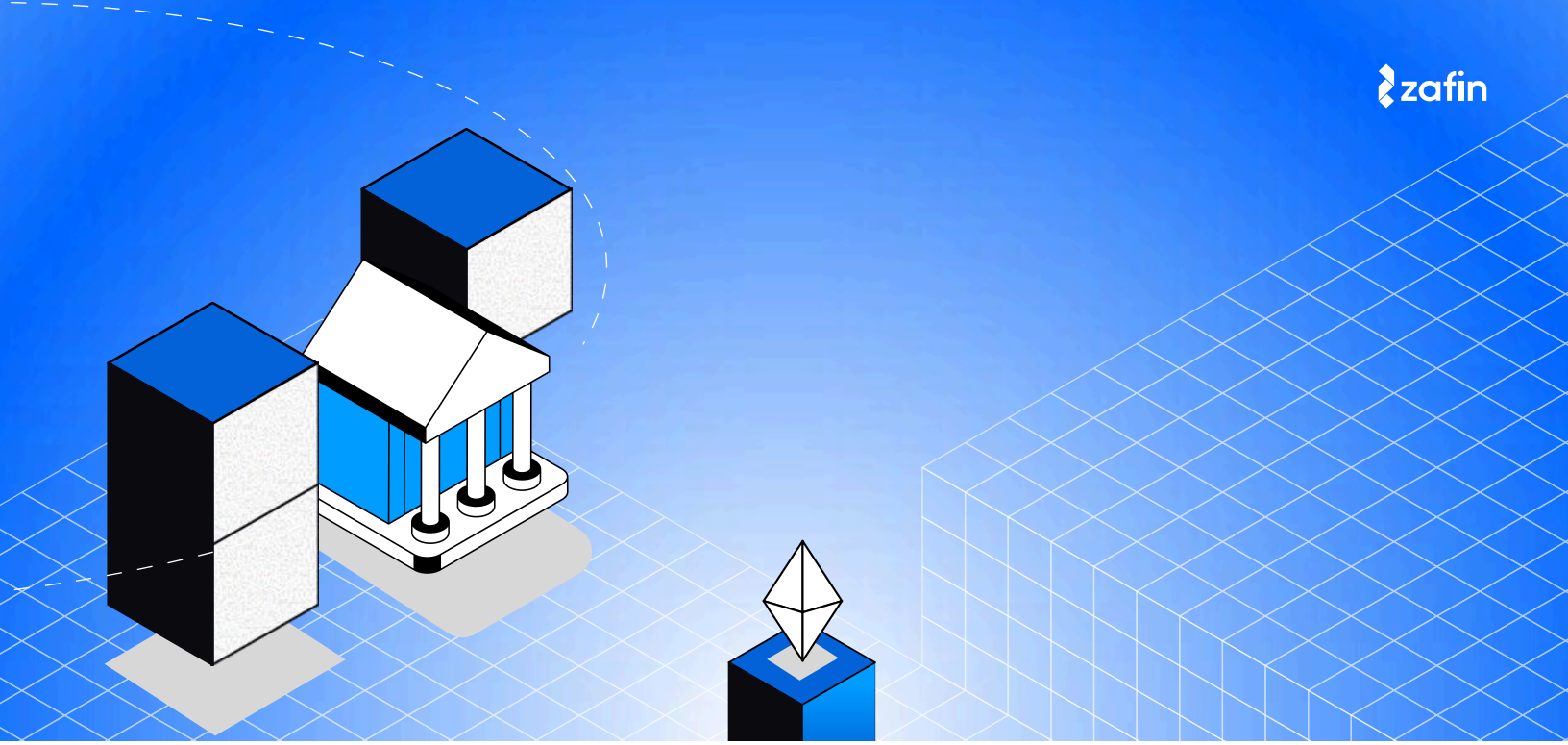


Executive summary

Banking has always been built on trust, precision, and resilience—and for decades, legacy core systems have delivered these values with quiet consistency. These systems have powered the global financial system, processing trillions of dollars, anchored operations and helped banks build decades of customer confidence.

But the world has changed. Today's customers expect more: real-time access, embedded experiences, personalized products and zero-friction engagement across bank-owned channels as well as within the ecosystems, apps, and platforms they already use. Digital-native challengers are delivering on those expectations. Legacy cores can't keep up: not because they're broken, but because they were never built for this. And the pressure is no longer optional: intensifying regulatory scrutiny, operational resilience requirements, and competitive demands for real-time, ecosystem-ready services mean modernization has become both a business necessity and a compliance imperative.

The instinct might be to rip and replace. But there's a smarter, safer path that acknowledges what still works while enabling what comes next.

This is the story of how to modernize what matters.

Zafin enables banks to modernize from the outside in: externalizing key product, pricing, billing, agreements and disclosure capabilities into a modern cloud-native platform that integrates seamlessly with legacy cores. Instead of disrupting daily operations, you build around them. Instead of rewriting everything, you decouple strategically. Instead of waiting years for ROI, you deliver outcomes in months.

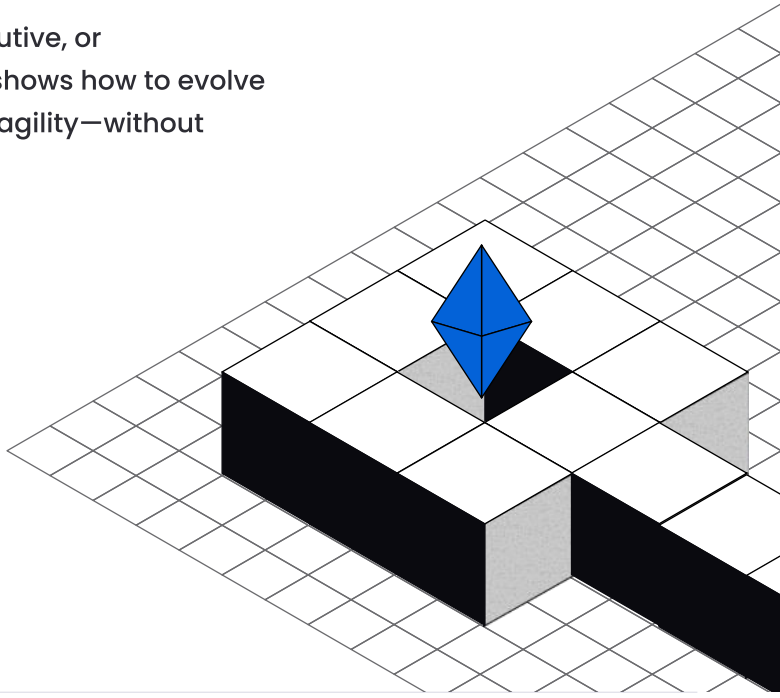
In these pages, we offer more than theory. You'll find:

- A modernization framework built for real-world complexity
- Integration models that support coexistence—not chaos
- Outcomes from banks already launching faster, reducing core load, strengthening trust, and improving customer relevance

Global research points to several converging pressures which include: rising customer expectations, faster challengers, ecosystem distribution, auditable data and accelerating technology, and cost and talent constraints. Together, they make modernization a strategic imperative.

Whether you're a CIO, CTO, architect, business executive, or transformation lead, this eBook is your blueprint. It shows how to evolve your architecture, reduce risk, and unlock business agility—without rewriting the foundation your bank runs on.

It's time to modernize what matters.



Chapter I: Understanding the Legacy Landscape

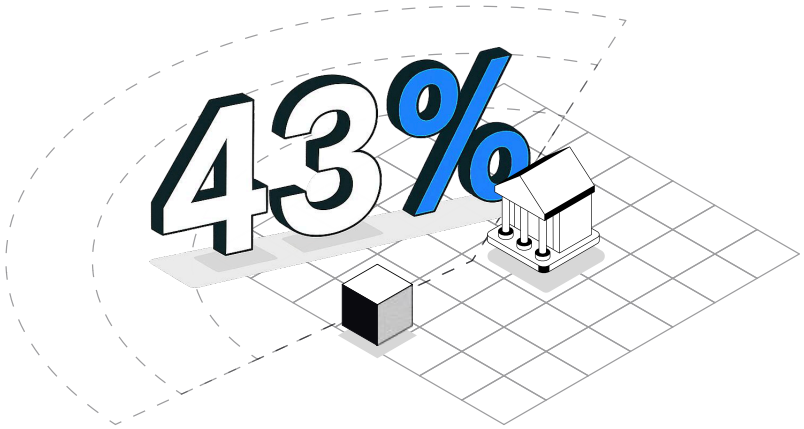
Chapter index

The backbone of banking – legacy core banking systems

Since the 1960s, legacy core banking systems have underpinned the industry, many of them written in COBOL (Common Business-Oriented Language) and designed for reliability, accuracy, and high-volume transaction processing. These systems handle billions of daily transactions across deposits, loans, payments, and customer records.

In the 1960s, these systems were breakthroughs—reliable, scalable, and purpose-built for transaction-heavy environments. COBOL in particular brought structure to chaos, powering deposits, payments, and account records with incredible stability.

Over time, legacy core banking systems evolved into the silent engines of global finance—so deeply embedded that nearly 43% of banking systems worldwide still rely on them, moving over $3 trillion each day.



But what these legacy systems weren't built for is everything modern banking now demands: real-time experiences, embedded finance, contextual pricing, rapid product launches, governed agreements, and dynamic disclosures that can adapt instantly to changing terms or regulatory requirements.

The challenge isn't that the core is obsolete. It's that the systems surrounding it are too tightly coupled, too inflexible, and too brittle to evolve quickly.

- Changes like pricing changes and getting out offers can take quarters.
- Regression testing is mandatory, complex, and lengthy.
- Fewer developers are available to work on these systems, and the cost of maintaining that talent keeps rising. Training programs and AI tools can help extend their life, but they do not solve the underlying inflexibility.
- Disclosures and agreements are often buried in static documents and siloed processes, creating compliance risk, customer disputes, and broken trust.

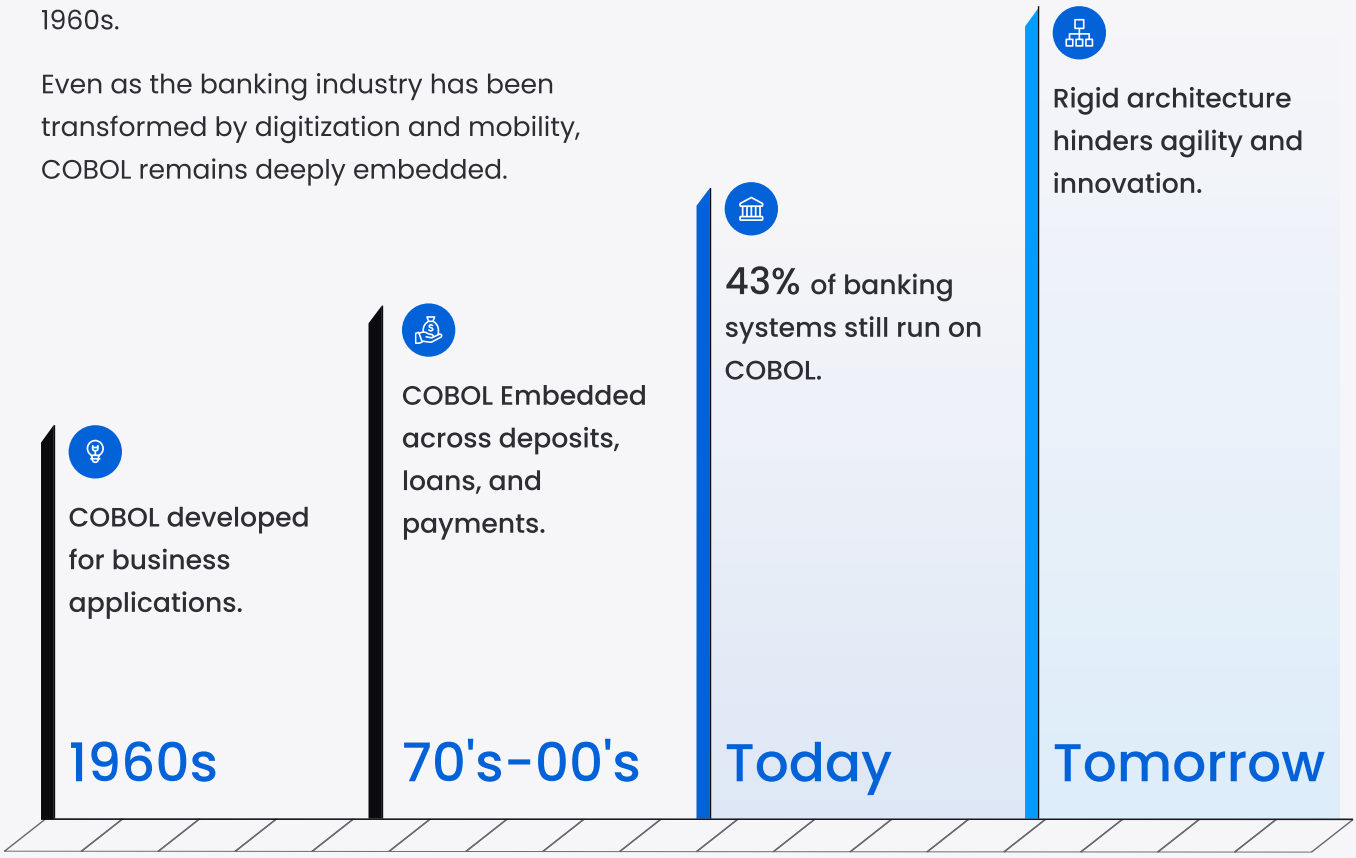
The result? A reliable engine that's become a barrier to responsiveness.

That doesn't mean the core has to go. It means the bank needs a way to reduce reliance on it and return it to what it was meant to be: a simple, resilient system of record (ledger) at the center of a broader, modernized architecture.

The evolution of legacy core banking systems

Designed for reliability and high-volume transaction processing, COBOL cores became the cornerstone of core banking systems in the 1960s.

Even as the banking industry has been transformed by digitization and mobility, COBOL remains deeply embedded.



Why modernization can't wait

It starts small. A customer waits too long to open a checking account online. Another one abandons a mortgage application halfway through because the rates feel out of sync with what they saw on your homepage. A business client calls to negotiate pricing—only to discover their relationship tier wasn't factored into the offer.

These aren't glitches. They're signals. And every one of them points to a deeper constraint: a core banking system that wasn't designed to adapt in real time.

The urgency to modernize is now visible in every customer interaction. Every onboarding delay, every outdated offer, every moment of friction is an opportunity lost to a competitor, a fintech, or a faster-moving bank.

Five pressures are reshaping banking:

01 
Customer expectations for personalization and transparency across channels and ecosystems.

02 
Competitive pressure from challengers and fintechs moving faster with lower costs.

03 
Technology and data demands, from cloud and APIs to AI and auditable, connected data.

04 
Regulation and trust requirements, including stricter oversight, disclosures, compliance, and resilience.

05 
Cost and talent constraints, as IT overhead rises and legacy skills grow scarce.

Global research confirms these pressures are universal.

Modernization is no longer optional; it has become an enterprise-wide imperative.

The risks and roadblocks of modernization

Modernization sounds straightforward—until you're in the middle of it.

You can’t pause daily operations. You can’t miss compliance windows. You can’t afford downtime. And you definitely can’t afford to fail.

Full core replacement is one of the highest-risk transformations in banking: costly, time-consuming, and fraught with uncertainty.

Programs often span 5–7 years, cost hundreds of millions, and require coordination across dozens of systems, business lines, and regulatory teams while delivering minimal incremental business value along the way. Delays, integration failures, and customer disruptions are common.

Key risks include:

High costs

New infrastructure, licensing, workforce retraining and long-term delivery overhead can be expensive.

Service disruption

Core migrations are rarely seamless; outages and business interruptions are common.

Data complexity

Decades-old systems contain siloed, inconsistent, and often undocumented data.

Integration headaches

Every change must account for dozens of dependencies across digital and operational channels.

Regulatory and compliance risk

Regulators expect continuous transparency (especially during high-risk transitions) and legacy systems make it difficult to trace or verify agreements and disclosures when customers or regulators demand proof.

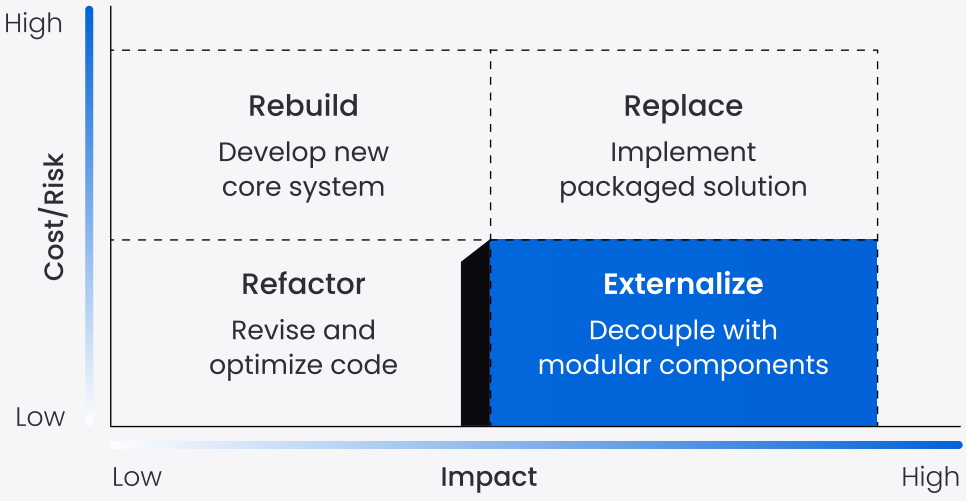
The lesson is clear: modernization fails when it becomes 'all or nothing.' But here's the good news—it doesn't have to be. There's a better way. One that avoids the disruption of "rip and replace" and focuses instead on modular, incremental transformation that reduces core dependency without rewriting the entire system. This approach is faster, more flexible, significantly lower risk and it sets the stage for externalization and coexistence models that deliver measurable value along the way.

Chapter II: Modernization Approaches and Frameworks

Four modernization paths for the core

Modernization is a strategic decision that demands clarity. It's not just about replacing technology—it's about balancing business risk, operational continuity, and speed to value.

Four paths to modernization



Externalization balances low risk with high impact — the pragmatic path forward

"Modernization is always on the roadmap, but that doesn't mean it's funded or understood. You need a business-led case and a way to move fast—without breaking everything else."

—Dave Revell, CIO, CIBC [Banking Blueprints Podcast]

Every bank must make a choice—not just about how to modernize, but where to begin.

There's no single blueprint. But most banks land on one of four paths, each with distinct trade-offs:

Rebuild: Develop a new core system from the ground up using modern technologies. This allows for full customization and futureproofing, but with high cost, long timelines, and substantial risk.

01

02

Replace: Swap out the legacy system for a vendor-built modern core. While faster than rebuilding, it still requires deep integration, operational change, and complex migration efforts.

Refactor: Modernize parts of the existing legacy core, such as converting to microservices or improving modularity without replacing the entire architecture. This path can improve performance and maintainability but may deliver limited functional gains.

03

04

Externalize: Decouple key business functions including product, pricing, billing, agreements and disclosures from the core and manage them externally. This minimizes disruption, accelerates delivery, and unlocks innovation while maintaining the stability of the existing core.

More and more banks are choosing externalization. It delivers speed, preserves core continuity, and sets the stage for future flexibility. Importantly, it also aligns directly to the five pressures reshaping banking: customer expectations, competitive pressure, technology and data, regulation and trust, and cost and talent. Externalization is the only path that addresses both the business and technology agenda.

This approach continues to gain traction because it balances risk and return. Externalization avoids the high cost and timelines of full replacement, while still delivering measurable business value quickly. Banks can now respond to market needs with agility, launch products in weeks instead of months, and reduce dependence on legacy code and scarce talent.

Critically, externalization also sets the foundation for long-term change. Over time, as more functionality is migrated out, the core is reduced to a minimal, isolated system of record. This makes any future core replacement far less risky and far more controlled.

Strategic considerations before you begin

Every successful modernization starts long before the first integration. It starts with alignment.

Modernization isn't just about systems—it's about business priorities, organizational readiness, and leadership clarity.

To set the stage for success, banks should:

- **Define business objectives**

  Clarify what success looks like. Is the goal agility, compliance, cost savings, market responsiveness, trust or a combination of these?

- **Align business and technology goals**

  Modernization fails when technology leads and business sponsors aren't working toward the same outcomes. Shared ownership of outcomes is essential.

Assess system dependencies

Map your ecosystem. Identify what depends on the core, what can be safely decoupled and what will require orchestration to ensure continuity.

Evaluate core and data readiness

Assess whether data is clean, accessible, and structured for externalization, and whether the core can expose what you need. This includes agreements and disclosures, which must be verified, version-controlled, and consistently available across channels.

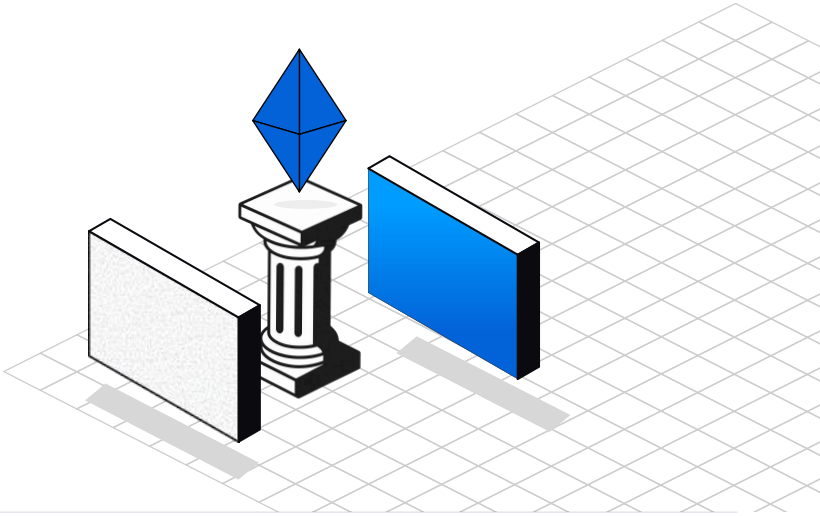
Identify and mitigate risk

Design for resilience by planning continuity, phasing rollouts, and defining fallback strategies.

Build stakeholder alignment

Bring IT, risk, compliance, and product to the table early and keep them engaged. Ownership must be shared, not delegated.

With the right foundation in place, banks can move forward with confidence, minimizing surprises and maximizing strategic impact. The six alignment questions—defining outcomes, aligning business and IT, assessing dependencies, evaluating data (including agreements and disclosures), managing risk, and engaging stakeholders—provide a practical framework for preparation. Modernization then becomes less of a leap and more of a structured roadmap that earns support from the C-suite down.



Six alignment questions

01 **What outcomes are we solving for?**

Define success in terms of agility, compliance, cost, trust, and customer experience.

---

02 **Is our technical foundation ready?**

Assess systems, infrastructure, and ability to support modular externalization.

---

03 **How will modernization impact our data, agreements, and disclosures?**

Ensure data is clean, connected, auditable, and governed across products and promises.

---

04 **Are business and IT aligned?**

Create shared ownership of goals, timelines, and measures of success.

---

05 **What risks do we need to manage?**

Plan for continuity, phased rollout, and fallback strategies.

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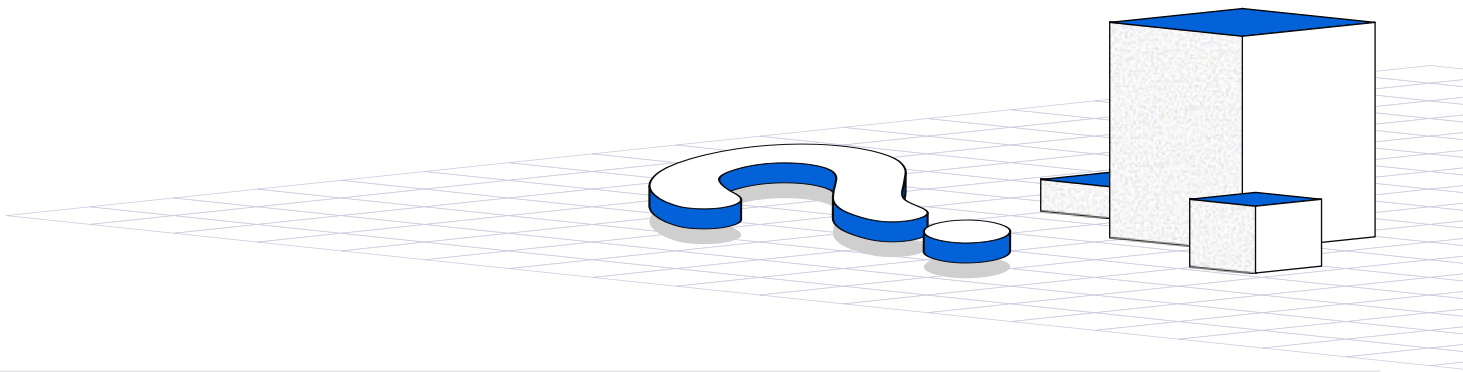
06 **Are stakeholders ready to engage?**

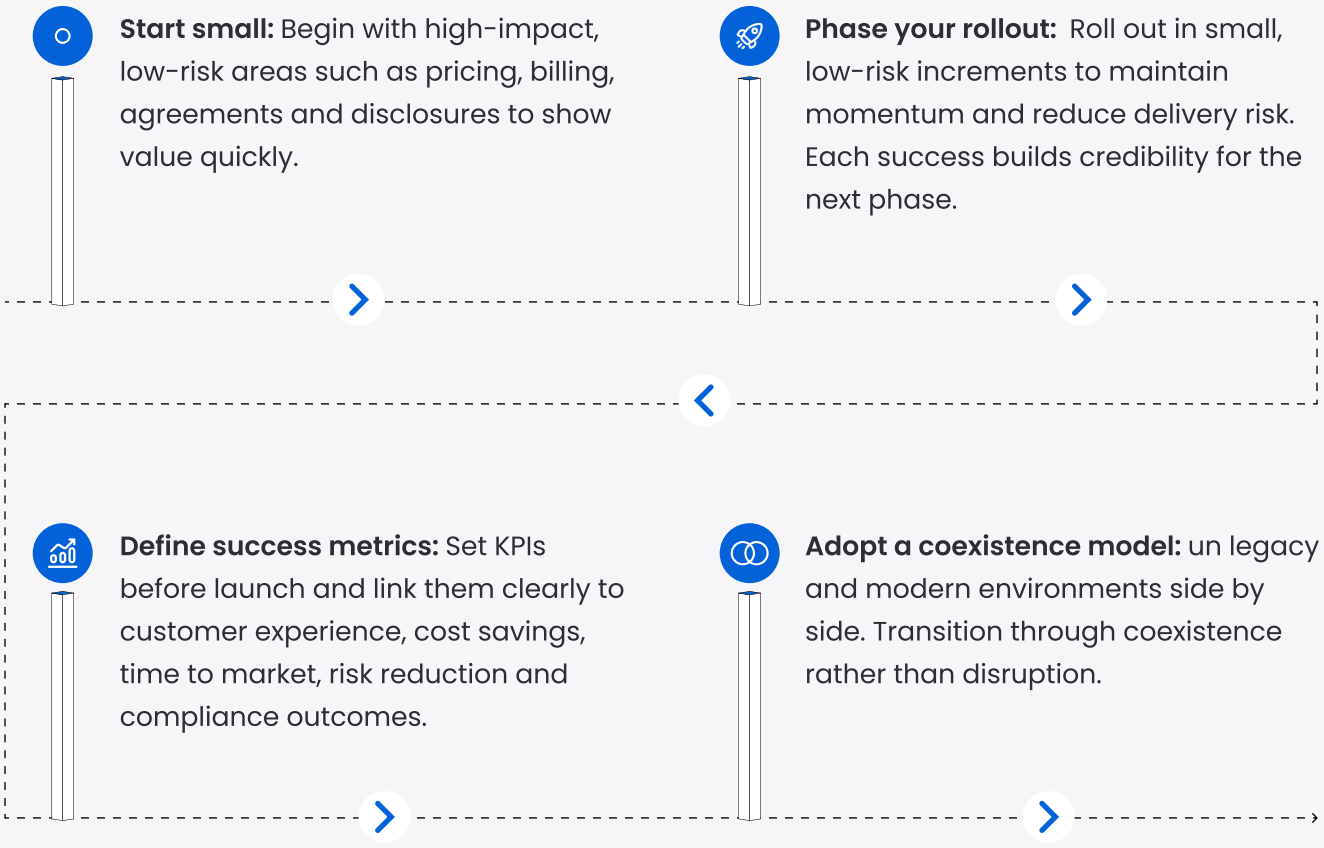
Engage IT, risk, compliance, and product teams early and sustain alignment.



Building a modernization roadmap

You don't modernize everything at once. You modernize what matters, then build from there. Modernization succeeds when it's phased, focused, and measurable.

A strong roadmap should prioritize early value and reduce risk at every stage:



The result is a modernization program that scales strategically, at a pace that matches business need and as well as organizational capacity, while strengthening trust through consistent agreements and disclosures.

Chapter III: Zafin's Philosophy of Externalized Modernization

Introducing Zafin

Zafin is an AI-powered strategic modernization platform designed to work alongside the core, not replace it. It's how banks modernize from the outside in, moving critical functions into a governed, modular platform that evolves independently of the core.

Externalization is the foundation of Zafin's design philosophy. Our enterprise-grade, domain-aware model has been proven at scale in some of the world's largest banks.

With a modular structure and embedded intelligence throughout, Zafin allows banks to modernize selectively, focusing on what drives growth, compliance, and customer trust.

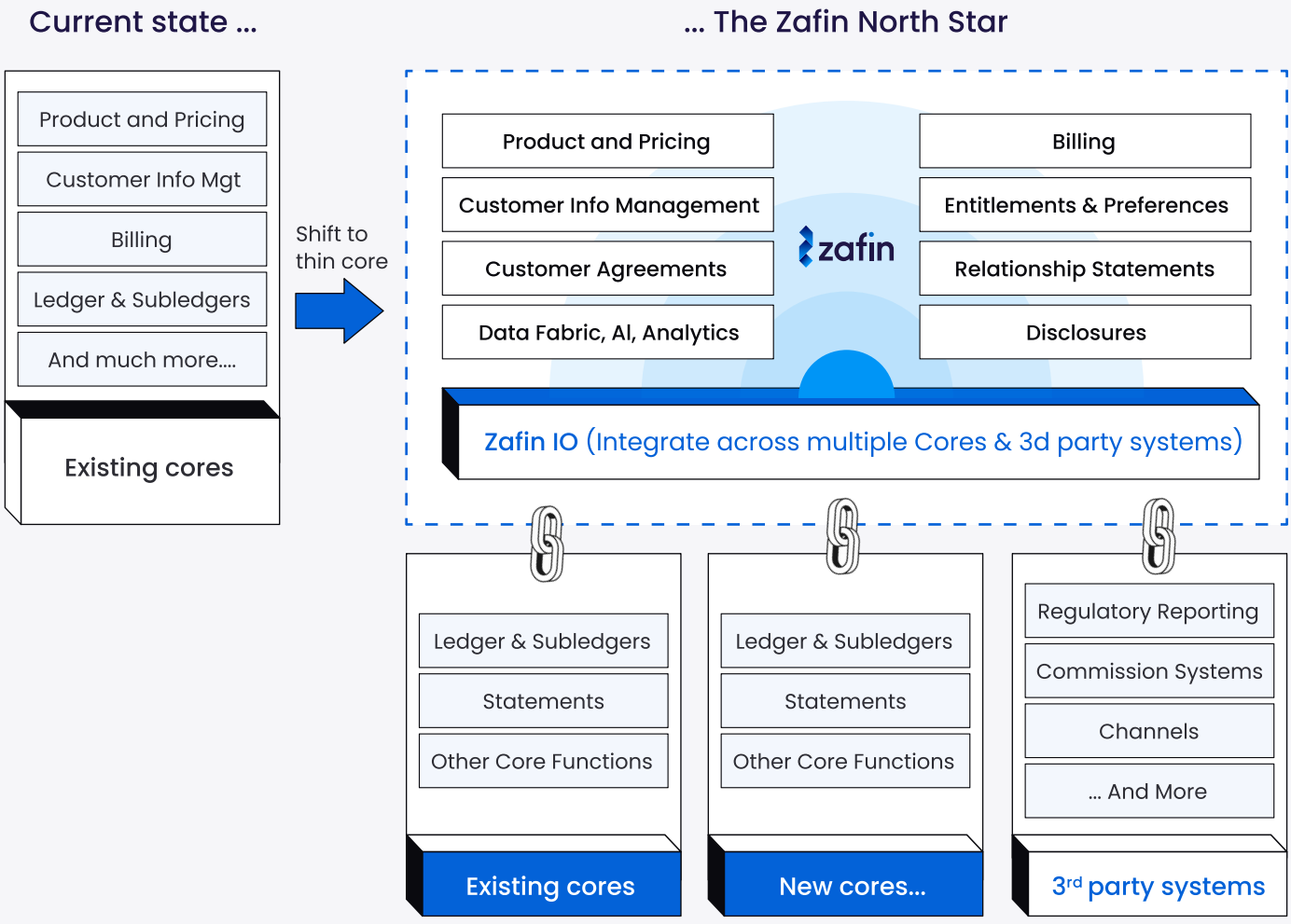
Zafin integrates with both legacy and modern environments. It decouples product, pricing, billing, agreements and disclosures, giving banks flexibility without introducing architectural risk.

Each externalized capability carries its own audit trail, version control, and compliance guardrails—making modernization not only faster, but safer, more transparent, and regulator-ready.

Whether running COBOL or deploying a cloud-native core, banks can externalize key capabilities into a unified platform that evolves independently, without disrupting day-to-day operations. With pre-built connectors, low-code tools, and deep domain expertise, Zafin helps unify the product and customer value lifecycle. This accelerates time to market, simplifies compliance, and enables personalized, revenue-generating experiences across channels.

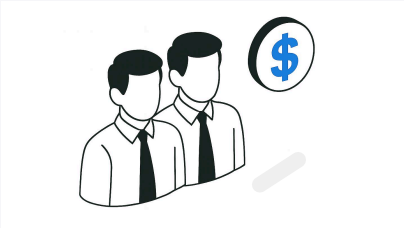
The result is direct empowerment: pricing can be configured without coding, disclosures remain consistent across every channel, and compliance is auditable in real time—all with automation that reduces risk.

This philosophy comes to life in how Zafin externalizes core functions. Instead of leaving product setup, pricing rules, billing, agreements, and disclosures buried in monolithic cores, Zafin externalizes them into a centralized, API-first platform that evolves independently of the ledger.

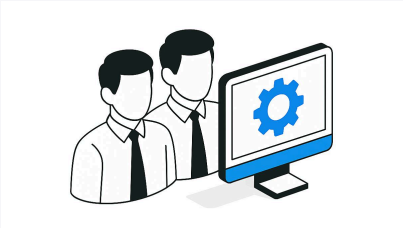


For most banks, the starting point is product and pricing, two of the most innovation-constrained functions within the core. Once externalized, launches become faster, more flexible, and better governed, without the long release cycles or COBOL constraints.

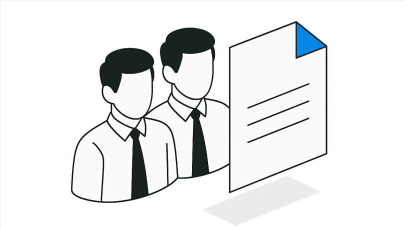
Here's how it plays out:



A pricing team wants to deploy new relationship-based tiers. Instead of waiting on a core release, they configure it in Zafin and push it to all channels.



A digital team wants to bundle new products for a spring campaign. They don't call IT. They model it, test it, and launch.



A compliance team needs to update disclosure rules across multiple products. Instead of revising static documents in silos, they configure the change once in Zafin and it flows consistently across every channel.

These are the kinds of workflows externalization unlocks.

And the benefits compound. Every function block moved out of the core makes the next change faster, safer, and easier to govern. Externalization enables ongoing transformation, not just a one-time win.

See the appendix diagram for an end-to-end example of creating and launching a new offer, from configuration through orchestration and governed distribution.

Zafin's model aligns with emerging banking reference architectures such as BIAN's "Coreless Bank" strategy, which promotes decoupling through APIs, external orchestration layers, and business domain microservices.

Unlike generic middleware, Zafin delivers domain-aware orchestration for product, pricing, billing, agreements and disclosures. This reduces risk, accelerates adoption and ensures modernization delivers transparency as well as speed.

The Zafin platform architecture

The Zafin AI-powered platform is purpose-built for modern banking transformation.

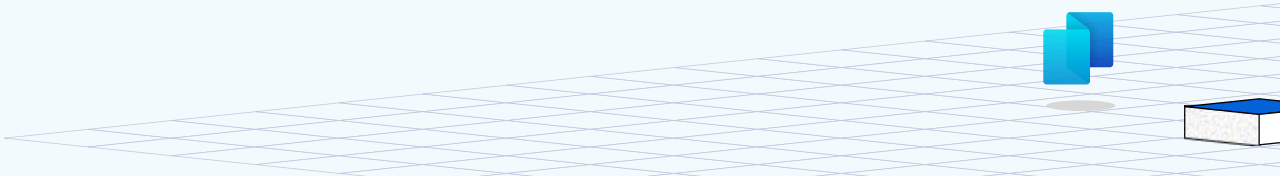
It enables banks to modernize selectively and incrementally, across both legacy and modern environments, without disruption. Modular, extensible, and API-first by design, the platform supports phased transformation while coexisting with existing systems and avoiding the need for full core replacement.

Hosted on Microsoft Azure, Zafin delivers enterprise-grade scalability, availability, and compliance aligned with standards such as SOC 2, ISO 27001, and GDPR.

The workflows described above, from configuring pricing tiers to bundling new products and updating disclosures, show how externalization works in practice. These capabilities come together in the Zafin Platform, which provides a structured model built on five layers. Each layer enables a pillar of modernization, and together they externalize critical functions, orchestrate data, and extend modernization into every channel and ecosystem:

Product & Pricing

Zafin's Product & Pricing capabilities provide a centralized catalog and pricing engine for defining, configuring, and managing the lifecycle of banking products. From basic accounts to complex bundles, banks can design offerings with precision and flexibility. Features include dynamic pricing, multi-variant product configurations, cross-sell rules, and eligibility criteria. This externalization of product logic ensures consistency, accelerates time-to-market, and allows banks to introduce innovative propositions without the constraints of legacy code.



Deal Lifecycle & Billing

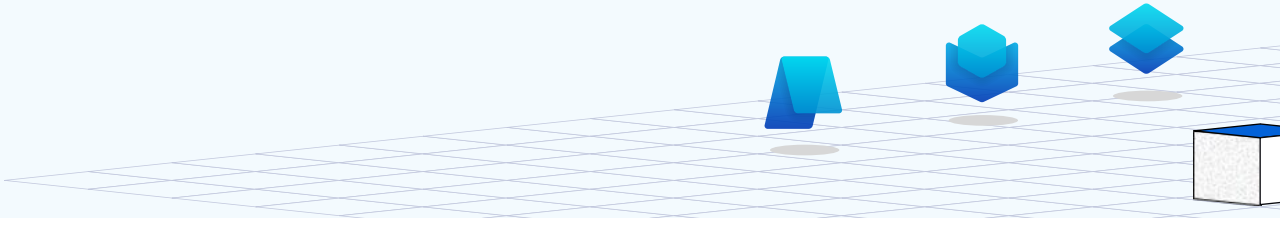
The Deal Lifecycle and Billing layer supports the full process of managing structured deals and billing events. Banks can create and execute customized deals with governance and compliance controls built in. Billing functions manage recurring fees, event-based charges, waivers, and discounts with transparency and accuracy. By centralizing and externalizing billing, banks reduce revenue leakage, simplify audits, and adopt flexible fee models that enhance both profitability and customer trust.

Customers & Relationships

This layer enables banks to build deep, connected views of their customers. It links products, parties, agreements and disclosures into a unified relationship model, supporting householding, entitlements, and tiering. Features include loyalty programs, disclosure management, and consolidated relationship statements. By governing agreements and disclosures in this layer, banks can deliver personalization with transparency, stronger engagement and grow customer lifetime value.

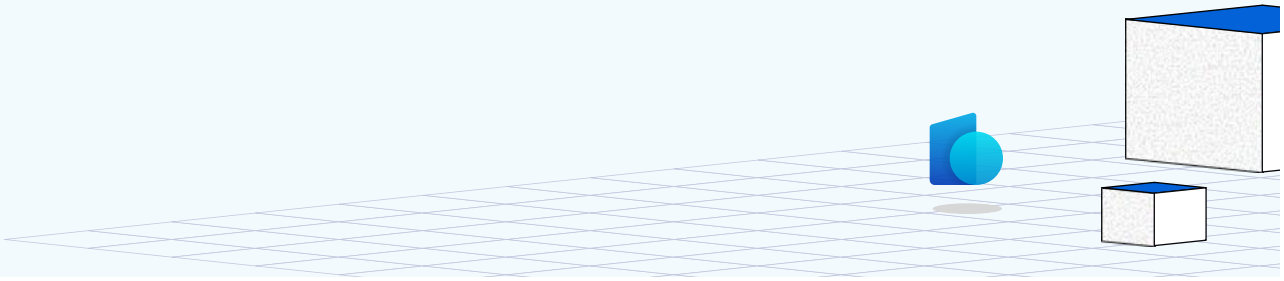
Data & AI

The Data & AI layer provides actionable intelligence across the platform. With embedded analytics, AI-driven signals, and prebuilt data models, banks gain insights into product performance, pricing effectiveness, and customer behavior. Features such as transaction enrichment, cohort segmentation, and predictive analytics enable proactive decision-making. This ensures pricing strategies, product innovation, and customer experiences are continuously optimized.



Integrate & Orchestrate

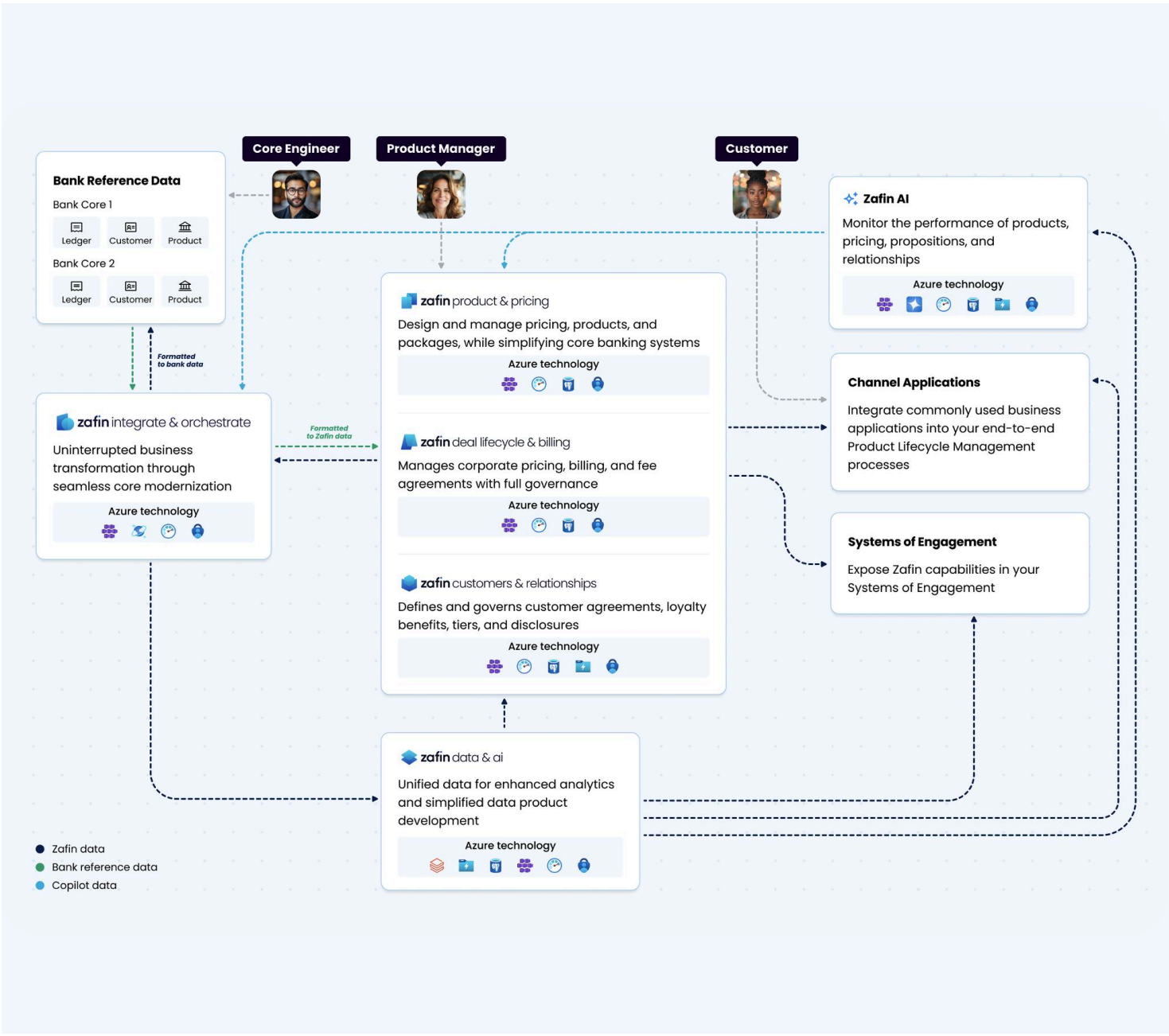
Zafin IO connects the platform seamlessly with legacy cores, digital channels, and external ecosystems. It supports real-time and batch integrations through APIs, prebuilt connectors, and low-code tools. Orchestration capabilities manage data flows, enforce governance, and provide observability. With audit trails and AI-enabled orchestration, banks can integrate quickly and securely while ensuring compliance and transparency.



With its composable design, the Zafin platform empowers banks to modernize confidently, scale flexibly, and unlock new value. Together, these five layers provide the structure to externalize what matters, keep the core stable, and deliver modernization that is agile, transparent, and trusted.

The Zafin platform in context

While the five-layer model describes the core design of the platform, this architecture view illustrates how Zafin connects across the broader banking ecosystem. At the bottom foundation, the core banking systems remain as the ledger of record. At the top, digital channels, partners, and customer engagement layers deliver experiences to market to customers. Zafin sits in between in the middle, orchestrating products, pricing, billing, agreements, and disclosures, while unifying data flows through its integration and intelligence layers. By bridging core systems with customer-facing applications and external ecosystems, the platform ensures modernization is not only modular and incremental but also consistent, transparent, and governed across every product and promise.



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Chapter IV: Zafin Integrate & Orchestrate (IO) and the Art of Seamless Integration

Chapter index

Meet Zafin IO – The integration layer for modern banking

Seamless modernization starts with seamless integration.

Modernization doesn't happen in a vacuum. For banks, it happens in real time while systems are live, customers are transacting, and compliance requirements remain non-negotiable. That's why integration is a strategic enabler—not just an IT task. And it's where Zafin IO comes in.

Zafin IO is the integration and orchestration layer that makes externalization possible. It acts as the connective tissue between legacy cores, modern platforms, and third-party ecosystems, making it easier to scale without rebuilding. It provides co-existence, serves as an anti-corruption layer, and bridges the legacy with the modern.

"Integration is not just a technical necessity; it's a strategic enabler that allows banks to modernize without disrupting ongoing operations."

—Shahir Daya, Chief Product & Technology Officer, Zafin

Unlike generic middleware or ESB tools, Zafin IO is purpose-built for banking. It understands the complexity of legacy environments and the regulatory rigor banks must operate within. It's built with the real-world constraints of COBOL cores, compliance processes, and siloed systems in mind and is designed to simplify modernization, not complicate it.

Core capabilities of Zafin IO

Zafin IO delivers enterprise-grade integration capabilities in a modern, modular platform. Its design is guided by three principles: composability, observability, and bank-grade resilience.

Key features include:

Low-code Zafin Canvas
A visual interface that empowers architects and developers to design, manage, and orchestrate data flows and integration workflows with minimal coding. It accelerates development cycles and makes complex processes more transparent and manageable.

Pre-built core connectors
Out-of-the-box integration with widely used core systems. These connectors reduce integration effort, risk, and time-to-value.
Real-Time APIs & Event Streaming.

Real-Time APIs & Event Streaming
IO supports real-time interactions through APIs, as well as event-driven architecture powered by Kafka-compatible streaming. This enables real-time responsiveness across products, pricing, billing, and digital touchpoints.

Hybrid processing support
Whether a bank needs batch-based reconciliation or real-time pricing, IO supports both modes. This flexibility ensures backward compatibility with legacy systems while enabling forward-thinking digital strategies.

Compliance & observability
Full audit trails, metadata lineage, and traceability come standard. IO is built to satisfy the highest standards of regulatory compliance, offering visibility and control across every integration.

Scalable, secure infrastructure
Hosted on Microsoft Azure, IO benefits from world-class security, elasticity, and global compliance capabilities, ensuring integrations can scale as transformation grows.

Integration as a strategic differentiator

Modern banks can't operate in silos. APIs, streaming events, and workflow orchestration are no longer just technical features, they are how banks move faster, connect better, and deliver personalized value.
Zafin IO provides the backbone for composable banking. It gives banks a way to build modularly, scale securely, and evolve incrementally—without disrupting what already works.

By acting as a modernization "middle layer," Zafin IO allows legacy systems to coexist with new cloud-native capabilities, supporting use cases such as:

- Real-time pricing updates delivered to digital channels.
- Centralized product catalogs pushed to multiple front ends.
- Billing events streamed live from customer transactions.
- Configurable onboarding logic externalized from the core.

Built to evolve with you

Zafin IO evolves with your architecture and with your ambition.

For one mid-sized North American bank, integration used to mean nine-month project plans and multiple vendor escalations. With Zafin IO, they launched their first pricing service integration in under 90 days—without touching the core.

As your bank's modernization journey unfolds, Zafin IO evolves with you. Whether you start by externalizing pricing or go on to orchestrate full product lifecycle management, IO provides the flexibility to adapt your integration strategy at every stage.

It supports:

- Agile experimentation without risking core disruption.
- Progressive de-risking through phased integration.
- Futureproofing by building a foundation for open banking, embedded finance, and ecosystem interoperability.

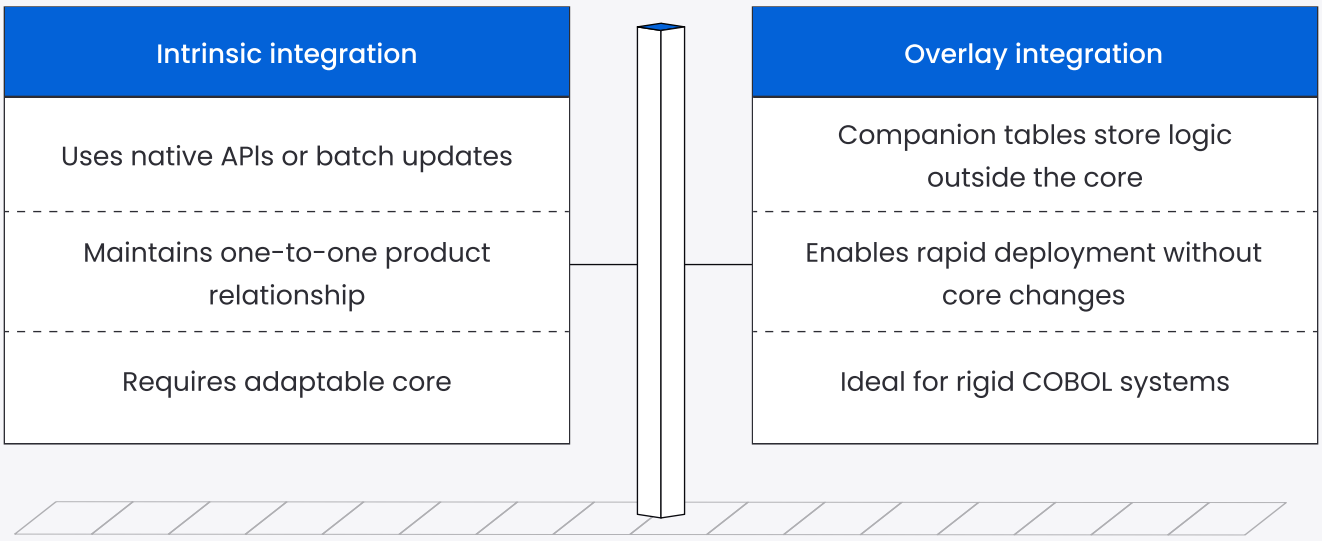
The bottom line

Integration is the unsung hero of successful modernization. And with Zafin IO, banks gain a trusted, banking-specialized integration platform that bridges the gap between the legacy past and the digital future. It is more than a technology layer. It is the connective power that makes modernization real.

Zafin IO helps banks integrate boldly, orchestrate intelligently, and transform confidently.

Choosing your integration model

Every bank's core is different. That is why Zafin supports two complementary integration models, each tailored to where your core is flexible, and where it's not.



1. Intrinsic integration approach

Intrinsic integration is best when the core already supports modern interactions such as native product setup, rate updates, or structured APIs.

In this approach, Zafin uses the core's own data structures as endpoints—treating them as extensions of the platform. Product and pricing logic is mastered in Zafin, then published into the core for execution, minimizing change and preserving service continuity.

If the core supports APIs or batch loads, Zafin connects directly. If not, it can adapt through alternative processes such as scheduled batch loads or custom APIs. The same method applies to interest rate updates, provided the core can manage interest rate attributes at the account level.

This approach maintains a one-to-one relationship between the product defined in Zafin and the product replicated in the core system. It's ideal for cores that can accommodate attribute extensions and have sufficient capacity to manage varied product or rate definitions.

However, when limitations exist, such as a restricted number of product or rate types, banks may adopt a hybrid model. For instance, the intrinsic model may be used for products, while interest rate logic is externalized using the overlay approach.

A thorough assessment of the core's capabilities, such as its handling of rate assignments and account-level customizations, is essential to determine the optimal integration path.

This approach:

- Leverages existing extensibility within the core.
- Minimizes infrastructure change.
- Works well in environments where controlled customization is feasible.
- Preserves a 1:1 product and pricing relationship.
- Enables rapid rollout without touching underlying core logic.

This approach prioritizes progress over perfection. Intrinsic integration is often the best next step when your core gives you just enough flexibility to build around it.

2. Overlay integration approach

Overlay integration is best when the core lacks flexibility.

Many legacy cores, especially COBOL-based, often can't be extended easily. In these cases, Zafin externalizes product and pricing logic into lightweight structures that the core references.

These data tables act as a real-time lookup layer: externalized but co-located.

These tables store:

- Product attributes
- Interest rates and related parameters
- Account-to-Zafin product mappings

Zafin owns the logic and publishes updates into these structures using batch or API syncs.

When the core system accesses product or rate parameters, it supplements them from these companion tables rather than internal configuration. This allows the core to operate using a simplified placeholder or "shell products," while the rich logic and attributes are maintained and controlled externally.

This approach:

- Removes the need to configure new products directly within the core.
- Enables rapid deployment of new products through external publishing.
- Links every account to the correct Zafin-managed product through a reference table.

Implementation complexity depends on how your core handles product parameters—centrally or distributed. If your core uses a centralized parameter service—such as in systems like DXC's Hogan or FIS Systematics—Zafin can isolate integration to that layer. If the core accesses parameters directly through multiple modules, more custom adjustments may be needed.

Zafin provides reference architectures, proven design patterns, integration templates and sample code tailored for leading core systems, so you can move faster, with less risk.

Picking the right path

"More often than not, we're actually getting questions from banks around business problems that they're trying to solve. So, I'm trying to get pricing, or I'm trying to get new products, or I'm trying to create loyalty with our customers. How do we do that? We can't do it today in a fast, easy way with our current core."

—Charbel Safadi, CEO, Zafin

This underscores why Zafin supports both intrinsic and overlay models. The objective is not to replace the core. It is to free teams to deliver products, pricing, and experiences without being blocked by what the core cannot do fast enough.

Most banks use both models: intrinsic where the core allows, overlay where it doesn't. Zafin is built to support both, so you can modernize at your own pace, without compromising performance.

IO use case deep dives — How Zafin powers real-world transformation

Zafin IO is the engine behind scalable, low-risk modernization.

It enables banks to externalize critical functions, reduce dependency on legacy cores, and accelerate innovation without disruption.

Highlighted use cases powered by Zafin IO:

Personalized pricing at scale
Enable relationship-based pricing models and deploy them across all digital and branch channels, without relying on core releases.

Automated fee management and governance
Centralize waiver rules and audit trails to ensure compliance, reduce revenue leakage and improve transparency.

Real-time digital onboarding
Power straight-through onboarding workflows that draw on product, pricing, and eligibility logic managed outside the core.

Mainframe workload reduction
Offload pricing, billing, and rules logic to externalized layers, reducing pressure and cost on mainframe environments.

Rapid product deployment
Launch new bundles or offers in weeks instead of months by decoupling product configuration from the legacy stack.

Multi-core bridging
Use IO to unify logic across multiple core systems, enabling centralized product management and consistent pricing across the bank.

Each of these use cases show how Zafin IO empowers banks to modernize incrementally, deliver measurable results quickly and build the foundation for long-term agility.

Chapter V: Enablers of Core Modernization

Cloud as a catalyst

Cloud isn't just infrastructure, it's acceleration.

For banks modernizing their cores, the cloud provides the agility, resilience, and scalability needed to meet real-time customer expectations, shifting compliance mandates, and digital delivery requirements.

Zafin's platform is fully cloud-native and delivered on Microsoft Azure, offering secure, compliant, high-performance infrastructure that accelerates innovation with confidence.

Key benefits of Zafin on Microsoft Azure

Elastic scalability for peak loads

Zafin's platform scales dynamically for peak loads such as product launches, rate recalculations, or billing runs. This elasticity ensures consistent performance during high-demand periods and supports rapid growth without capacity constraints.

Built-in security and global compliance

Hosted on Microsoft Azure, the Zafin platform adheres to the highest standards of cybersecurity and regulatory compliance, including SOC 2, ISO 27001, GDPR, and more. Banks can trust that sensitive financial data is protected by multi-layered security architecture and monitored continuously to meet regulatory expectations.

Reduced infrastructure burden

Banks no longer need to provision, patch, or maintain physical infrastructure to support Zafin's capabilities. By removing on-prem complexity, IT teams can focus on delivering value rather than maintaining systems.

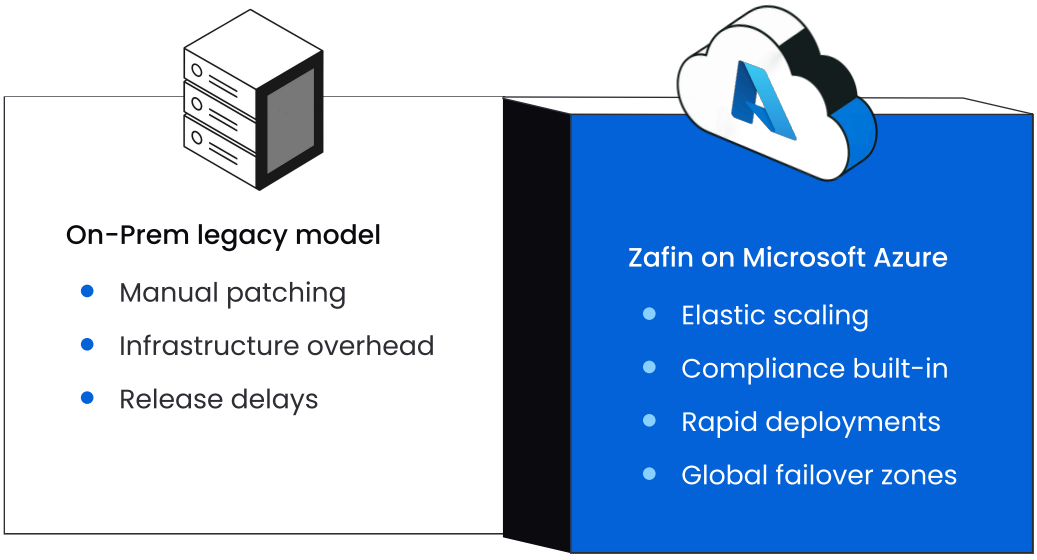
High availability, redundancy, and resilience

Azure's global presence and robust failover architecture ensure that Zafin's services remain available and performant, even in the face of localized outages or spikes in demand.

Accelerated innovation cycles

With continuous delivery pipelines and cloud-based deployment models, Zafin delivers updates, new features, and enhancements rapidly and seamlessly, empowering banks to adapt quickly to market changes.

Why cloud matters in core modernization



Transform without managing infrastructure

Cloud helps banks modernize at speed. Zafin's Azure-native foundation ensures they do it securely, scalably, and with confidence.

AI, automation, and intelligence

Every modernization journey faces two hurdles: speed and risk. AI helps banks' balance by making it possible to move faster without losing control.

AI in Zafin is not about experiments or pilots. It is embedded into the platform as an enabler of modernization, giving banks the ability to externalize critical functions such as pricing, billing, agreements, and disclosures while strengthening compliance and transparency.

By embedding AI into modernization workflows, banks replace slow, manual oversight with proactive optimization. Externalization becomes safer, compliance becomes stronger, and every modernization step becomes faster and easier to govern.

Key AI-driven modernization capabilities:

- **Dynamic pricing optimization:** Launch new pricing models quickly without waiting for core releases, balancing profitability with competitiveness.
- **Anomaly detection and revenue integrity:** Safeguard modernization by identifying leakage, errors, or policy gaps as logic moves outside the core.
- **Automated compliance reporting:** Generate transparent, auditable reports across modern and legacy environments, ensuring regulators have full visibility during coexistence.
- **Disclosure automation:** Update and deliver disclosures dynamically as products evolve, eliminating manual errors and strengthening customer trust.

AI at Zafin is not a layer on top. It is built into modernization itself, accelerating delivery while reducing risk and ensuring that transformation is both agile and governed.

API-driven ecosystems and embedded finance

Modernization is not complete without ecosystems. As banks decouple product, pricing, billing, agreements, and disclosures from the core, they must ensure those capabilities can flow securely and consistently into the platforms, partners, and channels where customers increasingly engage. APIs make this possible.

APIs in Zafin are not generic connectors. They are the enablers that extend modernization into real-world ecosystems, allowing banks to expose, consume, and orchestrate externalized capabilities without losing trust, resilience, or compliance.

By embedding APIs into modernization workflows, banks ensure that every externalized function can travel beyond owned systems and into partner environments with the same governance and transparency. Modernization becomes extensible, compliant, and ecosystem ready.

Key modernization outcomes enabled by Zafin APIs

- **Integration with partners and fintechs:** Extend externalized functions securely into partner platforms while maintaining compliance and governance.
- **Real-time embedded pricing:** Deliver contextual offers inside retail, travel, or marketplace environments without touching the core.
- **Open banking and Banking-as-a-Service (BaaS):** Meet regulatory mandates while turning modernization into new revenue opportunities.

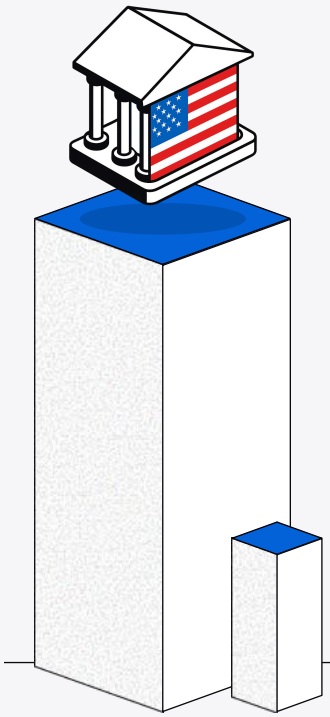
APIs at Zafin are not an afterthought. They are built into modernization itself, ensuring that transformation delivers speed and trust inside the bank and extends those qualities across every ecosystem it touches.

Chapter VI: Outcomes and Transformation Stories

Transformation in action

Modernization is not just theory. With the right enablers in place, it delivers measurable business impact.

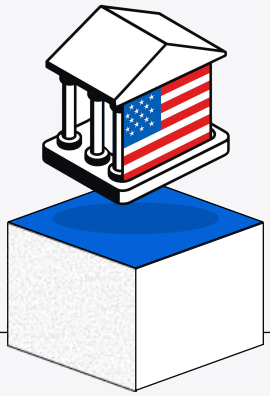
The Zafin platform powers transformation at some of the world's largest banks by enabling modular modernization, accelerating time-to-value, and reducing core dependency.



Top 5 U.S. Bank

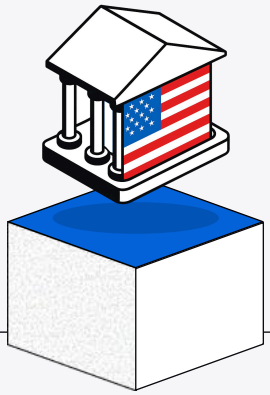
~$100M in interest expense via region-based pricing and achieved a 50% faster time-to-market for deposit rate changes.

Reduced mainframe workload by 60% through IO-powered orchestration, projecting $100M in cumulative cost savings over three years from reduced licensing and operations.



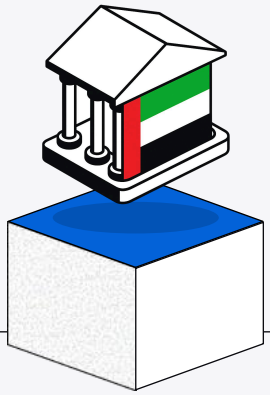
Top 10 U.S. Bank

Achieved go-live in under two months with the Zafin platform, resulting in a 50% increase in CDs origination.



Top 20 U.S. Bank

Retained $2B in deposits through personalized offers powered by relationship pricing and governed agreements.



Top 3 UAE Bank

Enabled complex corporate pricing by integrating across multiple core and servicing systems.

These stories show what's possible when modernization is abstracted from core replacement and aligned to business outcomes from the start.

The business case for modernization

Core modernization is no longer just a cost. With the Zafin platform, it becomes a strategic imperative to optimize revenue, efficiency, compliance and risk.

Core modernization is no longer just a cost. With the Zafin platform, it Too often, banks have viewed modernization as a costly prerequisite—an investment in infrastructure and long-term resilience rather than immediate business value. The Zafin Platform changes that narrative by externalizing critical functions and governing them centrally, so modernization delivers near-term value as well as long-term resilience.

By externalizing and governing key capabilities such as product, pricing, billing, agreements, and disclosures through the Zafin Platform, with Zafin IO as the orchestration layer, modernization shifts from being a defensive strategy to becoming a growth engine.

"The banks we work with aren't just looking to modernize systems; they're looking to unlock growth. That starts by externalizing what matters most to the business."

—Shahir Daya, Chief Product & Technology Officer, Zafin

These outcomes are not theoretical. They are lived experiences at institutions already modernizing with Zafin. Banks are unlocking measurable business impact across four dimensions:

1. Revenue

- Launch relationship-based pricing strategies that reward loyalty.
- Drive cross-sell through bundled products and governed offers.
- Experiment with new offers and rapidly test market response.

2. Efficiency

- Shift product, pricing, billing, and disclosure logic outside the core to reduce costly development cycles.
- Empower teams to configure, not code.
- Deliver product and pricing updates in weeks, not months.

3. Compliance

- Centralize logic for pricing, billing, agreements, and disclosures into a governed layer making it easier to demonstrate compliance, enforce policy.
- Demonstrate compliance with audit-ready rules across all channels.
- Automate reporting and reduce regulatory overhead.

4. Risk mitigation

- Modernize incrementally around the core rather than replacing it outright.
- Use coexistence strategies, enabled by Zafin IO, to preserve operations during transformation.
- Phase delivery to de-risk each step.

With the Zafin platform, modernization shifts from being a back-office burden to a front-line advantage. Banks gain the agility to compete, the efficiency to scale, the compliance to reassure regulators, and the governance to protect trust.

Chapter VII: Planning Your Journey with Zafin

Road mapping your modernization

A strong roadmap is more than a list of steps. It is a strategy for building momentum and reducing risk.

Zafin helps banks plan modernization journeys that are realistic, measurable, and built for momentum.

Each roadmap starts with four essential steps:

1. **Define vision and success metrics:** Start with a clear articulation of "why"

Is the goal to accelerate product innovation?

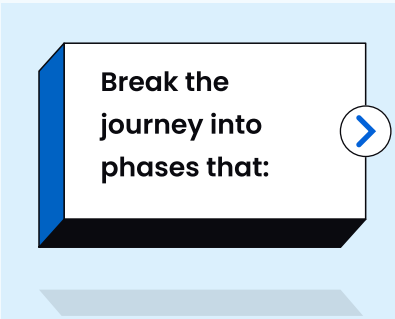
Improve customer experience?

Reduce operating costs?

Ensure regulatory agility?

Zafin works with clients to translate these goals into success metrics and KPIs that guide each phase, from pilot to scale.

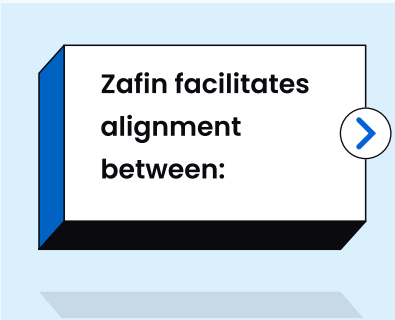
2. Segment modernization phases



- Deliver quick wins early (e.g., product and pricing).
- Reduce risk and cost.
- Build internal buy-in and delivery momentum.

Think of it as agile transformation rather than a big-bang event.

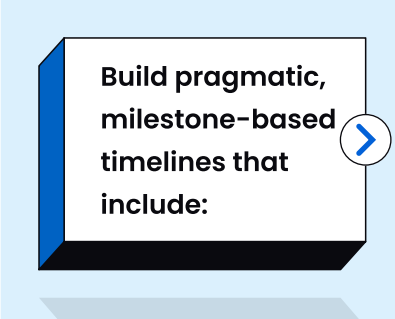
3. **Align stakeholders across business and IT:** Modernization often breaks down in ownership, not technology.



- Business
- IT
- Compliance
- Operations

Shared understanding keeps the roadmap on track and prevents delivery fatigue.

4. Create a timeline with risk checkpoints



- Feedback loops
- Readiness assessments
- Go/no-go checkpoints

This approach avoids surprises and allows time to adapt before scaling.

From roadmap to reality

Planning sets the direction. Execution creates momentum.

Once a strategic modernization approach is defined and phased, the next step is to translate strategy into operational wins.

Start small and deliver fast

Begin with low-risk, high-impact areas such as pricing, billing, or waiver rules. These carve-outs:

- Show fast ROI.
- Validate integration models.
- Build team confidence without putting mission-critical operations at risk.

Maintain legacy coexistence for stability

Keep legacy systems running while introducing new capabilities incrementally. This coexistence model avoids outages, preserves operations, and supports incremental rollout.

Test, iterate, and scale with confidence

Run parallel environments to validate functionality and manage risk. Use phased rollouts to:

- Minimize disruption.
- Gather feedback.
- Adapt before scaling.

Track progress and course-correct in real-time

Dashboards provide visibility that drives accountability. Zafin enables banks to:

- Track KPIs.
- Identify roadblocks early.
- Align teams around data-driven decisions.

What to expect along the way

Modernization is a phased journey that delivers practical, measurable outcomes.

Beyond planning and execution, modernization has a lived reality that banks experience as the journey unfolds.

Quick wins through externalization: Externalizing targeted functions early, such as pricing or product definition, allows banks to:	✓ Launch in weeks, not years, delivering real business functionality without touching the core. ✓ Demonstrate value quickly, validating the broader strategy. ✓ Build internal credibility and stakeholder confidence.
Progressive de-risking: Each externalized capability reduces reliance on the legacy core, leading to:	✓ Less technical debt, freeing teams to focus on innovation. ✓ Lower operational risk as new services run alongside the core. ✓ Greater flexibility to scale or pivot, since modular components are easier to reconfigure.
Organizational learning and process maturity: Modernization not only introduces new capabilities, it evolves institutional behaviors:	✓ Agile rollouts replace slow, waterfall projects. ✓ Business, IT, and compliance collaborate more directly. ✓ Self-service tools empower teams and reduce engineering bottlenecks.
Tangible ROI within months: Banks begin to realize measurable returns within months:	✓ Faster product launches at the pace of market demand. ✓ Reduced pricing exceptions through centralized, transparent logic. ✓ Lower mainframe and infrastructure costs by offloading complexity.

Modernization is no longer deferred ROI—it's near-term advantage.

Chapter IX: A Future-Ready Bank, Today

Modernization does not need to start with a revolution, but it must start with resolve.

Legacy cores aren't the end of innovation. They are the foundation for reinvention. With the right roadmap, architecture, and partners, banks can evolve confidently: retaining the strengths of their core systems while unlocking the agility, personalization, and intelligence needed for the digital era.

Whether your priority is speed to market, compliance clarity, or unlocking new customer value, modernization becomes achievable when it's modular, measurable, and designed for coexistence, not disruption.

So, what comes next?

Reassess your core dependencies. Where is agility most blocked?

Engage your cross-functional teams. Modernization isn't just IT, it's product, pricing, risk, and operations.

Define a focused starting point. Begin with what drives the most value and prove it fast.

This is the moment to shift from legacy maintenance to legacy leverage. Modernization is already happening. The question is whether you will lead it.

Start where it matters. Modernize what matters.

Appendix

How externalization works in practice

A single initiative, such as creating an offer, flows through Zafin from configuration to governed execution. Product, pricing, billing, agreements, and disclosures are externalized and orchestrated, then distributed consistently across every channel. Governance, versioning, and auditability travel with each step, ensuring speed, transparency, and trust.

Creating a new offer with Zafin

A product manager at a bank wants to launch a bundled savings and credit card offer in time for a seasonal campaign.

1

Product & Pricing

- They configure the new bundle in Zafin's product catalog.
- Dynamic pricing rules are applied for different customer segments.

2

Data & AI

- Transaction enrichment and segmentation identify which customers are most likely to respond.
- Predictive models fine-tune the offer to balance profitability with competitiveness.

3

Deal Lifecycle & Billing

- Fee waivers and discount rules are added and governed centrally.
- Billing logic ensures charges and waivers are applied consistently across channels.

4

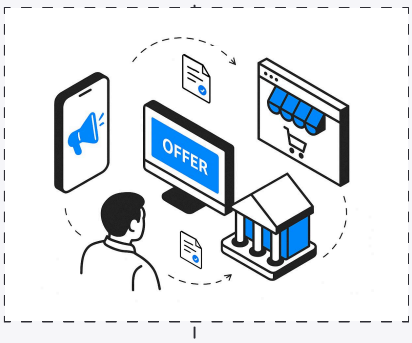
Integrate & Orchestrate (Zain IO)

- APs and events push the new bundle to digital channels and branch systems.
- Pre-built connectors integrate seamlessly with the legacy core for account servicing.

5

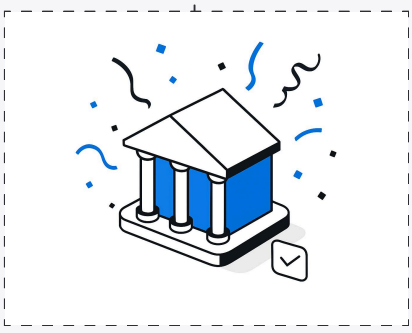
Customers & Relationships

- Agreements and disclosures are automatically generated and version-controlled.
- The customer sees clear, transparent terms at the point of acceptance.



Distribution

- The offer appears simultaneously in mobile, web, branch, and through a partner marketplace.
- Disclosures and agreements travel with the offer, ensuring compliance everywhere.



Outcome

- The bank launches in weeks, not months.
- Customers receive personalized, transparent offers.
- Compliance and auditability are built in, and the legacy core remains stable.

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