

Hollow Out the Core

Strategic Approach to Modernizing
your Monolithic Legacy Landscape
with Naehas





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Executive Summary

Core banking systems are the backbone of financial institutions, yet many remain heavily burdened by outdated, inflexible architectures. As banks and credit unions face increasing pressure from evolving customer expectations, regulatory demands, and digital-first competitors, the need for core modernization has become urgent and unavoidable.

Several market forces are intensifying this urgency:

- Many core banking platforms are approaching end-of-life, creating risks for institutions relying on aging technology.
- Regulatory bodies are increasing pressure for transparency and customer fairness, as seen in frameworks like the FCA's Consumer Duty.
- Heightened rate volatility demands faster, more agile pricing updates, and rising competition from fintech companies and digital-first banks makes speed, flexibility, and personalization critical.

Additionally, Open Banking regulations are reshaping the competitive landscape. In the UK, mandates under PSD2 and the upcoming PSD3 require banks to enable third-party access to customer data with consent and publish product features and pricing. In the United States, initiatives from regulators like the CFPB are pushing toward similar standards. Yet most banking infrastructure remains unprepared to meet these open banking requirements at scale.

According to [Deloitte*](#), many leading U.S. banks still operate on core platforms from the 1980s and 1990s, often heavily customized, making them complex and costly to maintain. These legacy systems are increasingly difficult to support due to a shrinking pool of skilled professionals familiar with outdated technologies.

Despite widespread recognition of the need for modernization, resistance to change remains a major barrier. A [2024 survey**](#) of UK bank innovation leaders found that 77% believe challenging the status quo puts careers at risk. Legacy systems persist because 67% say they were chosen by current decision-makers, making them politically difficult to replace. Compounding this, 80% say boards avoid high-risk projects during their tenure due to reputational concerns. This climate of caution often results in institutional inertia, where fear overrides the urgency for transformation.



Modernization efforts can deliver substantial benefits: replacing aging systems, improving scalability, enabling real-time processing, reducing reliance on unsupported vendors, and setting the foundation for future digital initiatives. However, it is critical to recognize that **core modernization alone does not solve every challenge.**

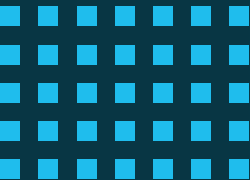
Core Modernization Solves	Core Modernization Doesn't Solve
Replaces aging core systems	Agile, dynamic product creation and bundling
Improves scalability, uptime and data access	Rapid launch of new offers and loyalty programs
Enables some real-time processing	End-to-end automation of pricing and disclosures
Lowers long-term operating costs	Real-time eligibility checks and hyper-personalization
Improves API infrastructure and Open Banking compliance	Comprehensive auditability and customer transparency

While a modern core improves infrastructure and access to data, it does not automatically enable agile product creation, dynamic pricing, cross-product bundling, or end-to-end automation of the product lifecycle. Without addressing these functional gaps, institutions risk carrying forward technical debt that limits their ability to innovate and scale personalized offerings.

Many institutions mistakenly believe a modern core will unlock these capabilities out-of-the-box. But without externalizing and modernizing product, pricing and compliance functions, a new core alone delivers only incremental gains.
True modernization requires rethinking the architecture beyond the core itself.

This paper explores why migrating to a modern core, while necessary, is insufficient. Unless institutions address the legacy logic and operational complexity embedded deep in their systems, they will struggle to realize the full promise of transformation.

Banks and credit unions that prioritize system simplification by hollowing out their core can begin unlocking value much faster. Accelerating product innovation, improving customer experiences, and creating measurable impact in months, not years.





01

Why Core Modernization Alone Isn't Enough

Whether driven by competitive pressures, regulatory changes, digital transformation initiatives or M&A activity, core modernization efforts often reveal unforeseen technology obstacles. Without a clear strategy to simplify and rationalize systems, the expected value of modernization initiatives can take longer to materialize or be significantly reduced.

System Complexity and Delays

It's not uncommon for the initial mapping and planning phase of a core modernization program to take 6 to 18 months before any major migrations or customer-facing improvements occur.

The complexity and duration of transformation efforts depend on several factors:

- Size of the institution
- Number and age of systems
- API compatibility
- Extent of customizations and legacy code
- Hosting infrastructure
- Data quality
- Complexity of product offerings and customer-facing channels

If the core modernization is focused on replicating existing functionalities, product etc. in the new core, rather than simplifying architectures, it will perpetuate technical debt rather than reducing it.





Outdated and Non-Rationalized APIs

Not all APIs are created equal. Many legacy integrations, although labelled "API-enabled," lack the consistency, scalability and standardization needed for modern interoperability. Several underlying factors contribute to why APIs often become a major source of complexity during core modernization:

- **Ecosystem of Modules:** Core banking is rarely a single monolithic system. Instead, it consists of multiple modules for deposits, lending, payments, and customer management, often built with different technologies over time.
- **Complex API Landscape:** Institutions often inherit an array of custom-built integrations, hardcoded dependencies and siloed data structures. This patchwork can lead to a "spaghetti" web of redundant APIs, each performing similar functions in different ways, which can be time-consuming and costly to rationalize.
- **Fragmented Data and Increased Risk:** Multiple API versions across channels can result in inconsistent customer data, while hardcoded dependencies raise the likelihood of errors and operational disruptions. These undermine the goal of a unified, digital-first banking experience.

Hard-coded Products vs. the Need for Personalization

Today's banks face growing demands for personalized financial products. Customers no longer want generic credit cards or checking accounts. They're interested in intelligent banking experiences, such as:

- Personalized spending insights
- Automated savings wallets
- Tailored investment recommendations
- Behavior-based incentives
- Relevant product suggestions
- Dynamic bundled product offerings

Many institutions' products are hardcoded even after modernizing the underlying core system, making features, pricing, eligibility criteria, incentives, and behavioural triggers rigid and inflexible. As a result, offering personalized, dynamic financial products becomes complex and costly.

For example, a customer with both a mortgage and a credit card might expect combined rewards through a loyalty program, but legacy systems often prevent recognizing and rewarding these relationships consistently or in real time.

This lack of flexibility hinders the ability to offer the personalized, dynamic banking experiences customers have come to expect. Any change, whether it's a new pricing structure, a targeted offer or a customized bundle, requires extensive IT intervention, long development cycles and costly system updates.



Product Proliferation and Conflicting Data

One of the biggest operational burdens financial institutions face, regardless of their core platform, is uncontrolled product proliferation. Where even slight parameter changes create a new product instead of applying a rule to an existing one.

For example, a bank might technically offer just a few credit cards, but due to legacy system constraints, they end up managing thousands of product variations.

This creates significant compliance, governance and operational challenges:

- Institutions must maintain multiple versions of products and associated documentation (such as disclosures, terms and rate sheets).
- Rate changes, especially those triggered by central bank interest rate adjustments, require manual updates across hundreds or thousands of product variations and their corresponding documents.
- Even small rate shifts can take weeks to fully implement, introducing compliance risks, operational costs and reputational exposure.
- Consistency must be preserved across multiple regulatory environments, adding further complexity.

During modernization, particularly when consolidating multiple systems, this challenge multiplies. Each system brings its own bloated catalog of products, often with overlapping but slightly different configurations, compounding inefficiencies and regulatory risks.

Without a structured approach to product rationalization, institutions can struggle with:

- Redundant offerings
- Increased maintenance costs and inefficient operations
- Errors in applying fee or rate changes
- Significant customer experience risks, as inconsistencies in pricing and disclosures can lead to disputes, fines and reputational damage

The Role of a Centralized Product Master

A Product Master serves as the single source of truth for all product definitions, pricing rules, eligibility criteria, and associated disclosures across systems and channels. While the concept, separating product logic from the core, is familiar to most business leaders, CTOs and CIOs, achieving it is often technically complex due to the deep entanglement within legacy systems.

Without a Product Master, every adjustment, rate change, or disclosure update must be manually replicated across fragmented platforms, introducing risk, inconsistency, and operational delays. Centralizing product governance simplifies updates, improves compliance, and enables faster product launches.



Compliance Risk and Resource-intensive Disputes

Compliance issues often stem from a lack of transparency and auditability in product offerings and disclosures.

- **Risk of Mis-Selling:** A recent example involved the mis-selling of financial products, where fees or commissions were embedded into interest rates without clear disclosure, leading to regulatory crackdowns years later.
- **System Gaps:** Without a robust system to track and retrieve historical product terms, fees, and conditions, institutions face massive compliance risks, revenue leakage and operational inefficiencies.
- **Manual Verification:** Customer disputes become costly, as verifying past disclosures requires extensive manual effort, often leading institutions to settle claims rather than investigate.

A clear, version-controlled audit trail of disclosures can significantly reduce disputes, improve regulatory compliance, and enhance customer trust by providing full transparency into past transactions.

Specific types of disputes that often arise in legacy environments include:

- **Cashback offer qualifications**
Example: "I spent enough to qualify for cashback but didn't receive it."
- **Interest rate eligibility validations**
Example: "I thought I was promised 4% interest, but my statement only shows 2%. Why the difference?"
- **Fee rebates and bonus interest promotions**
Example: "I signed up for a product that said 'no fees,' but now I'm seeing unexpected charges."





Without automated, version-controlled systems, institutions face prolonged resolution times, higher operational costs, and greater regulatory risk when investigating and addressing customer disputes. In many cases, the manual effort required to research and resolve these disputes outweighs the cost of settlement, leading institutions to favor customer claims by default rather than undertaking lengthy investigations.

Limits to Product Innovation and Lifecycle Automation

Even after a core modernization, many institutions find that fundamental obstacles to speed, agility and automation remain.

- **Agile Product Creation:** New product bundles, segmented offers, and dynamic pricing often require months to design, approve and launch.
- **Manual Rate Updates:** Interest rate changes from central banks still trigger manual recalculations and overrides across multiple systems, risking delays and inconsistencies.
- **Fragmented Offer Execution:** Cross-product bundling and personalized offers remain difficult to execute across accounts like deposits, credit cards, mortgages and loans.
- **Slow-to-Market Launches:** Launching new promotions or adjusting terms based on customer behavior often takes weeks or months instead of days, limiting competitiveness against digital-first challengers.
- **Disconnected Compliance and Disclosure Processes:** Pricing, eligibility, and disclosure updates are still often managed in silos, creating risks of outdated or inconsistent information reaching customers.

Without addressing these gaps, institutions risk investing heavily in modernization projects that take years to show meaningful returns. Institutions that prioritize system simplification, externalization of key business functions, and smarter API strategies can begin creating measurable impact in months, not years.



02

Strategic Approaches to Core Modernization

Core modernization requires strategic decisions on system transformation and offers an opportunity to rethink technology strategy more broadly. Many core systems are reaching end-of-life, with vendors phasing out support, creating urgent pressure for institutions to modernize their infrastructure.

Financial institutions typically consider the following options:

- **Big Bang (Rip-and-Replace):** A full migration to a new core platform, consolidating operations but requiring careful planning to mitigate risks like data migration challenges and service interruptions.
- **Maintain or Selectively Integrate Legacy Systems:** Some institutions delay full modernization by either maintaining existing platforms with limited interoperability or selectively integrating best-of-breed components. While this can minimize immediate disruption, it often increases long-term maintenance costs, operational complexity, and risks carrying forward inefficiencies.
- **API-Led Integration:** Uses an API layer to enable interoperability between existing and new systems, allowing flexibility and faster service integration. However, it may not address deeper core limitations.
- **Progressive Modernization (Iterative Strangulation):** Gradually externalizes and replaces legacy components with modern solutions, enabling continuous improvement while minimizing disruption.





Many institutions struggle with modernization due to outdated systems, fragmented transformation efforts, and limited awareness of advanced approaches. Each strategy presents trade-offs in risk, cost and long-term flexibility.

Among the approaches, progressive modernization, paired with a hollowed-out core strategy, emerges as the lowest risk, highest reward option. Financial institutions adopting this route typically see significant measurable benefits within months, not years.

Understanding these strategic choices sets the stage for exploring how institutions can practically achieve modernization objectives quickly and effectively through a hollowed-out approach, which we'll examine next.

Approach	Time-to-Value	Risk	Cost Impact	Operational Disruption	Scalability
Big Bang (Rip-and-Replace)	Long (2+ yrs)	High	High upfront	High	High
Maintain/Selective Integration	Short, but limited term	Moderate	High long-term	Low initially, high later	Moderate
API-led Integration	Medium (1-2 yrs)	Moderate	Moderate	Moderate	Moderate-high
Progressive Modernization	Short-Medium (1 yr)	Low-Moderate	Managed incremental	Low-moderate	High



03

Optimizing Core Modernization with a Hollowed-Out Approach

Modernization presents a strategic opportunity for banks and credit unions to reassess their core systems and adopt a broader transformation approach. It is often a practical time to evaluate a hollowed-out core strategy and identify partners who can enable it.

The trend of hollowing out the core began with outsourcing payments and card processing but has steadily expanded to include areas such as AML, fraud detection and KYC. This shift allows institutions to strengthen compliance, security and agility without overhauling their entire core platforms. Similarly, while many banks still handle loan servicing within the core, functions like origination and underwriting are increasingly externalized to digital lending platforms to drive faster approvals and automation.

More recently, banks have extended this strategy to include product management, pricing, and regulatory disclosures. By externalizing these critical business functions, institutions can enable greater agility, accelerate innovation cycles, simplify modernization efforts, and prepare for evolving regulatory and customer demands.



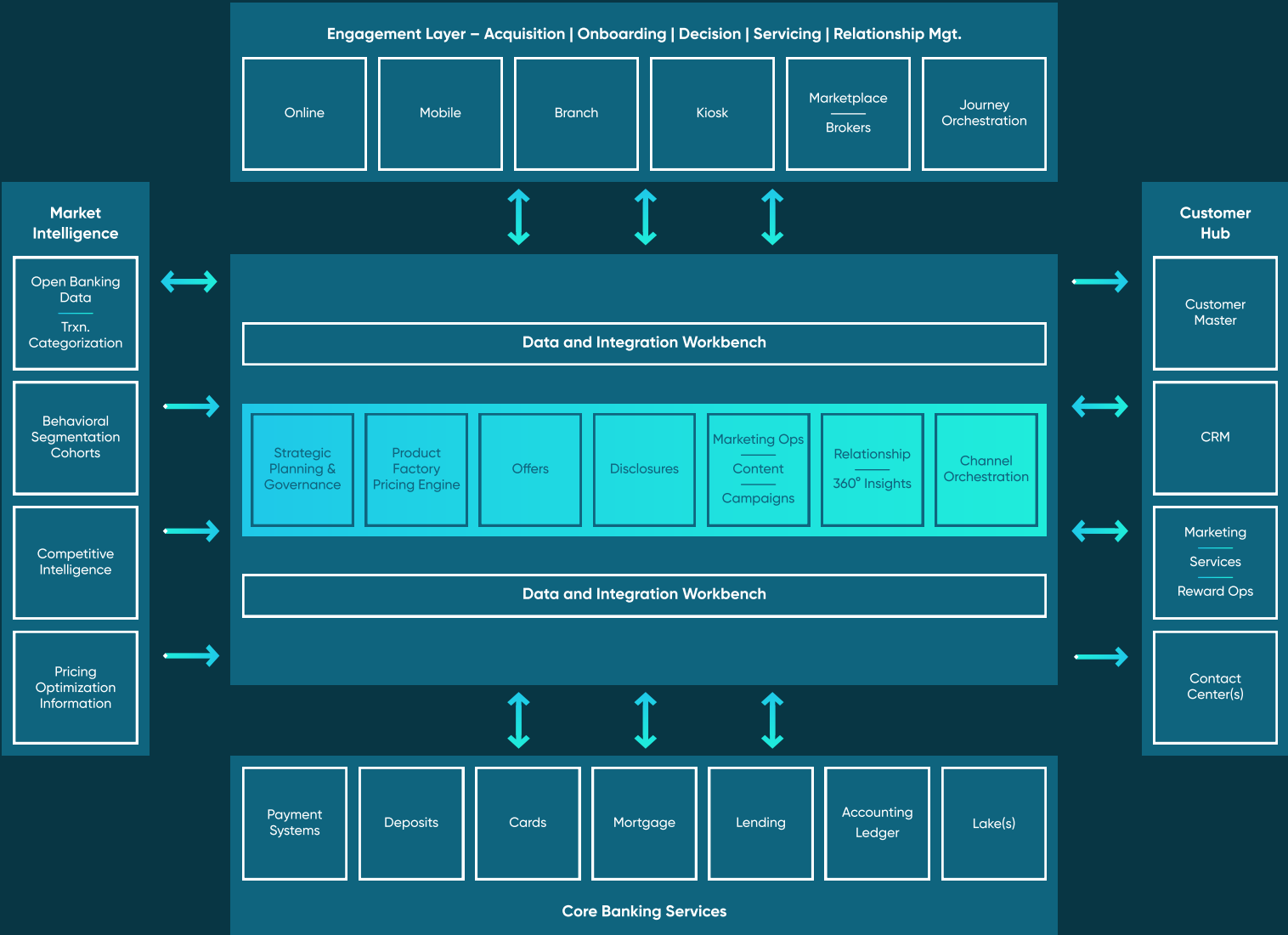
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Introducing Naeahas

Naeahas uncomplicates core modernization by hollowing out the core into an agile, cloud-based, low-code/no-code platform. Acting as an intelligent orchestration layer, Naeahas’ platform spans strategic planning and governance, product management and pricing, offer and disclosure management, as well as marketing operations including content, campaigns, and the customer insights needed to drive them.





An API-first, BIAN-Compliant Ecosystem

Modernizing core banking systems often involves addressing fragmented architectures and inconsistent data models. Rather than undertaking a costly and risky core replacement, Naehas enables seamless integration by mapping data into a common model, allowing banks to streamline operations while maintaining existing systems.

Institutions working with legacy cores must harmonize customer data, products and transaction processing to enable true modernization. Naehas absorbs this complexity by integrating flexibly with any core banking system, including FIS, Fiserv, Jack Henry, Temenos, 10x and legacy systems, through batch processing, real-time APIs, and event-based messaging. This ensures a smooth transition without disrupting business operations.

Core Rationalization with Naehas

Rather than a high-risk, full-scale core replacement, Naehas enables an iterative strangulation approach of gradually extracting key functionalities from the legacy core for a controlled transition process:

- 1. Externalizing Product, Pricing, and Offers Management:** Product definitions, pricing models and offer management move to the Naehas platform, simplifying the core and enabling faster product launches and revenue growth.
- 2. Decoupling Core Migrations from Product Delivery:** Business logic (pricing, fees, interest rates, eligibility, compliance and approvals) is separated from the core, accelerating time to market.
- 3. Reducing Migration Complexity:** With business logic managed within the Naehas platform, the core is streamlined to focus on ledger and product and customer master functions while Naehas handles dynamic product configurations.
- 4. Minimizing Risk and Cost:** A leaner core and modular modernization strategy can cut transformation timelines from up to five years to under two, significantly reducing risk, cost and operational setbacks.

Naehas delivers a SaaS-based platform, while trusted partners manage implementation. With a single cloud-based codebase, Naehas delivers automatic updates, ensuring banks always have access to the latest features and industry best practices without destabilizing upgrades.

By decoupling these functions from legacy cores, **Naehas helps banks simplify core modernization, reducing costs, minimizing risk, and accelerating transformation** without the disruption of a full-scale core migration.



Accelerating Time-to-Value Through Product Innovation & Expertise

With deep domain expertise and a modern platform already trusted by top-tier financial institutions, Naehas transforms financial product innovation by providing a single source of truth for all product data, enabling hyper-personalization, rewards optimization and micro-segmentation at scale. While many banks have modernized front-end channels like mobile apps, gaps in data integration often lead to fragmented customer experiences.

By externalizing key business functions from the core, Naehas empowers business users like marketers, product managers and bankers to design and launch financial products without IT dependency. This accelerates value creation while reducing operational complexity.

Key Capabilities:

- **Product, Pricing and Offers Lifecycle Management:** Configure complex pricing models (e.g., balance-based rewards, salary-linked benefits) in minutes, overcoming rigid core constraints.
- **End-to-End Product Execution:** Unifies product management, disclosures and AI-driven marketing content compliance in a single platform.
- **Disclosure Management:** Automates disclosure creation with a rules engine, quality assurance tools and a compliance time machine for audit tracking.
- **Omnichannel Orchestration:** Deploy new products instantly across mobile apps, e-banking, kiosks and email campaigns via a unified API.
- **Cross-Product Orchestration:** Connects deposit, credit, mortgage, and loan data to enable relationship-based pricing, such as personalized interest rates across multiple accounts.
- **Hyper-Personalization:** Delivers real-time, granular pricing adjustments at the individual or segment level.

By decoupling these functions from legacy cores, Naehas helps banks simplify core modernization, reducing costs, minimizing risk and accelerating transformation without the disruption of a full-scale core migration.



04

How Naehas Compares

Why Naehas? A Comprehensive, Banking-Specific Framework

- > **End-to-End Modernization:** Unlike point solutions that focus on one aspect of integration, Naehas spans product rationalization, pricing, compliance, and omni-channel execution all under one roof.
- > **Modular Flexibility:** Banks can start small, for instance, by externalizing product pricing or disclosure management and scale up to advanced features like hyper-personalization or integrated marketing orchestration.
- > **Built for Banking:** Designed for the specific requirements of the highly regulated banking industry. Naehas helps unify data, eliminate siloed processes, and create personalized customer experiences while maintaining compliance.

Modernization Approach	Focus	Limitations	How Naehas Differs
Product and pricing platforms	Personalization through product configuration and pricing automation.	• No comprehensive suite for full product rationalization and compliance. • Limited support for integrated disclosures.	• Integrates product, pricing and compliance. • Centralized disclosures and regulatory controls.
Customer Engagement Platforms	Front-end experience (e.g., marketing, content).	• Does not unify product definitions or pricing across merged institutions. • Lacks deep core integration.	• Synchronizes back-end product logic and front-end engagement. • Ensures consistent customer experience.
Legacy Middleware/API Layers	Point-to-point integration.	• Masks underlying complexity without fully resolving it. • Risk of “spaghetti” integrations.	• Provides an end-to-end modernization framework. • Rationalizes APIs and externalizes core-dependent functions.



Conclusion: Unlocking Faster Value Through Core Modernization

As modernization initiatives accelerate across the financial sector, banks and credit unions face both significant challenges and opportunities. Without a structured modernization strategy, institutions risk delayed value realization, operational complexity and customer dissatisfaction.

Hollowing out the core decouples business operations from underlying technology, allowing institutions to unlock revenue streams and engage customers almost immediately. Improvements in customer experience, product innovation, digitization, incentives and loyalty programs, and offers happen upfront, while the legacy core is phased out gradually.

Instead of migrating an entire complex system, only essential functions, primarily the ledger, are moved, simplifying the migration process and minimizing disruption.

This phased modernization approach enables institutions to accelerate time-to-value, streamline operations, strengthen compliance, and build a future-ready, agile banking infrastructure.

Naehas enables institutions to move beyond incremental upgrades toward a comprehensive modernization model, one that delivers measurable business impact in months, not years.

Ready to Accelerate Your Core Modernization Journey?

- **Assess Your Current Landscape:** Identify which core-dependent functions you could externalize for quicker innovation.
- **Consider a Phased Modernization Strategy:** Evaluate different modernization paths for risk, cost and time-to-value.
- **Engage Expert Partners:** Leverage specialized platforms and domain expertise to manage complexity and unlock faster growth.

Connect with a Naehas expert to assess your modernization readiness, and explore how we can help you strategize, modernize and future-proof your banking operations.



Gaurav Bose.

Managing Director - Head of
Strategy: Product and Pricing

