

The Progressive Core Banking Modernization Starter Guide by Temenos



temenos

Your Starting point for Progressive Modernization

At Temenos, we speak with banking leaders every day, and they consistently highlight the need to streamline engagement, increase product agility, and reduce dependence on outdated and costly core technology. Many also recognize the urgency of modernizing decades-old systems but hesitate due to the cost, complexity, and resilience concerns associated with deep technical debt.

This hesitation also limits their ability to leverage modern technologies—such as advanced data tooling and AI agents—which require scalable, high-performance, real-time infrastructure to deliver meaningful impact. What may feel like a competitive advantage today will soon become a basic license to operate.

There is not a one-size-fits-all answer for this: there is no single core modernization path for universal success. A bank's departure point, risk appetite, future operating model, regulatory posture, and strategic ambitions all shape its modernization journey.

This guide outlines proven progressive modernization paths through composable capabilities, SaaS adoption and point solutions, that enable banks to address legacy constraints safely, deliver measurable business outcomes, and align technology investment with strategic priorities. These paths are not mutually exclusive: they can be applied independently or combined over time within a single organization, depending on a bank's starting point, target architecture, and broader business ambitions.

We also address the discovery phase of a core transformation program, helping banks assess their starting point and understand the range of modernization

What is Progressive Banking Modernization?

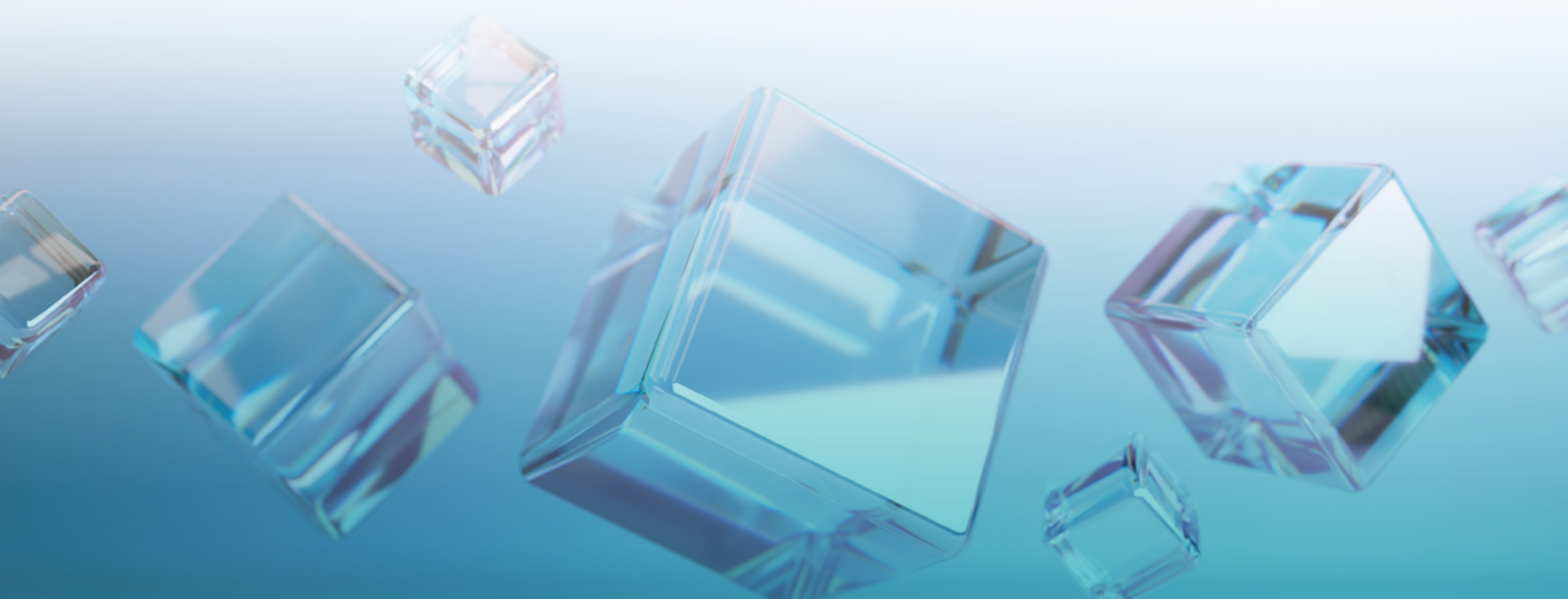
Banks must evolve their monolithic core platforms while preserving the operational stability these systems have long provided; otherwise, they risk failing to meet rising customer expectations and evolving market demands. Rather than pursuing a costly, high-risk, large-scale replacement, banks can incrementally decouple functions, leverage modern and resilient services, and enhance agility where it delivers the greatest impact.

Progressive modernization of core technology can be delivered in various ways, but its goal remains the same: to reduce disruption, spread investment over time, enable faster innovation, and preserve the robustness of proven legacy components—all while evolving the architecture into a more flexible, client-experience-led and robust banking platform.

options available. While core transformation is inherently complex, the focus is not on technology choices alone, but on building a future-ready core that delivers business value—combining flexibility, resilience, data, and evolving architecture to support user experiences, transformation programs, and regulatory and governance requirements.

Across the industry, we see how even well-intentioned transformation efforts can drift back into legacy patterns if not designed for long-term agility.

The real question for banks is: how do you accelerate your key priorities, stay genuinely future-proof and address the technical debt that slows you down?



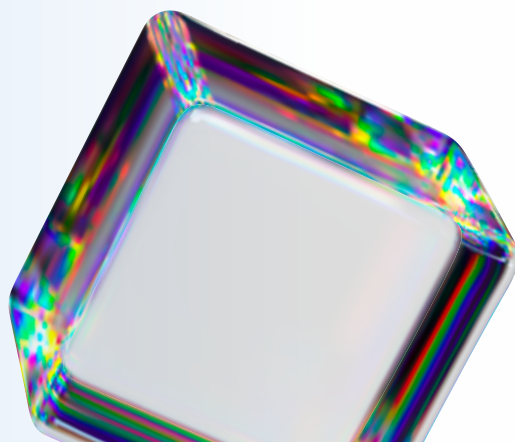
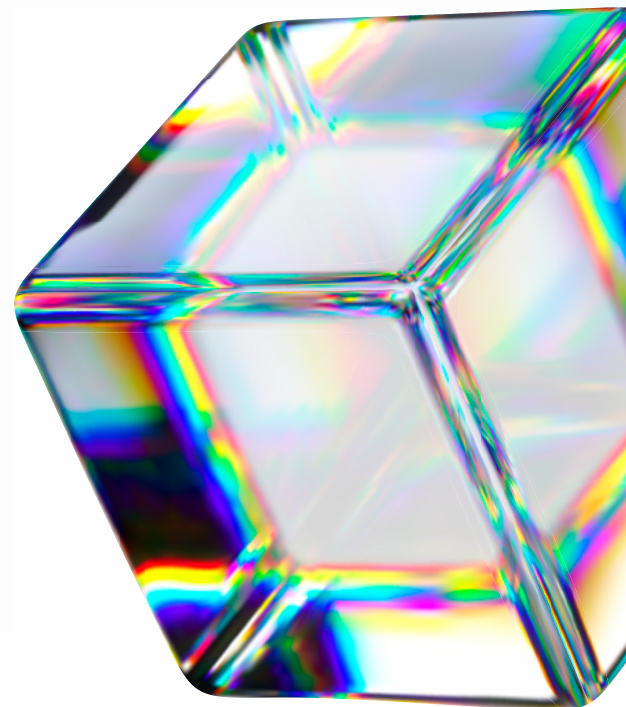


Approaching progressive modernization: 6 considerations

The universal ambition of banks to deliver personalized services goes far beyond digital touchpoints or the adoption of AI. What holds many institutions back today is rooted in fragmented core capabilities that lack interoperability and fail to provide real-time data. Without a modern core foundation, investments in personalization and AI remain constrained, delivering incremental gains at best while structural limitations persist.

And this is only the tip of the iceberg: resilience, security, cost efficiency, and the ability to adapt to new market demands or regulatory change all fundamentally depend on the strength of the core banking foundation.

To address these challenges, we want to help banks make a flying start ahead of your core banking transformation with 6 crucial core banking considerations.





1

What is your business-anchored North Star?

Core banking touches nearly every facet of a bank, so modernization efforts can't happen in technology isolation. Core banking modernization success requires strong stakeholder alignment from the outset and must be anchored in well-defined, agreed-upon requirements aligned long-term ambitions, even beyond the regular 4-5 year corporate business strategies. These requirements include clarifying future customer experiences and needs, considering operating model evolution, involving data strategy owners, consulting compliance and audit leaders, aligning business and IT stakeholders, and engaging your security team—to name a few.

2

What is the desired governance and operating model?

As regulation tightens and banking becomes increasingly “always on,” banks must define a governance and operating model that ensures resilience, uptime, clear accountability, and effective collaboration with technology partners. Key considerations include how technology is governed, how responsibilities are distributed, and how resilience and recovery are delivered across the stack. These decisions also influence whether SaaS, cloud, or on-premises models are the best fit.

3

How should banks prioritize modernization efforts?

Progressive modernization helps banks avoid large, lengthy transformation programs by enabling them to modernize the areas that matter most, first. This requires identifying the domains where modernization delivers the highest near-term strategic impact, whether through reduced operational risk, improved customer experience, faster product delivery or accelerating a specific product set.

4

How do you avoid excessive customizations?

Modernizing the core is not only about what you leave behind, it is about how you move forward. A critical principle is minimizing bespoke customizations in the new landscape, and hence following an ‘Adopt, not Adapt’ approach. Excessive tailoring may offer short-term benefits, but it erodes resilience, weakens control, slows upgrades, and ultimately constrains agility in both the near and long term.

5

How does core technology support a consistent, governed data landscape?

Core banking systems hold the bank’s most trusted data, but as architecture becomes more distributed, ensuring that data and key information stay consistent across all systems is increasingly critical. As multiple systems generate and store information, banks must define a model that establishes a single source of truth so that every channel, process, and AI application relies on the same validated data. A modern, enterprise-wide data architecture is essential to deliver a real-time, consolidated view of customer positions with strong consistency, scalable data and transaction processing.

6

What is your future architecture for success?

Historically, banking architecture was shaped by product-centric processes, often focused on delivering a single product to a single customer. Today, success depends on a deep understanding of customers, yet many banks remain constrained by legacy technology, untimely data, and fragmented client and product systems. This shift is foundational and demands a different architectural approach—one built on real-time, modular service domains, as reflected in industry frameworks such as BIAN, which provide a useful reference for designing future architectures. Ultimately, this enables banks to unify data across the enterprise, establish a single, trusted view of the client, and create a resilient and client centric foundation.



Three routes to resilient architecture for the future of your bank

In modern banking, customers expect intuitive, instant, always-on financial experiences—but the systems underlying many institutions are typically designed for a slower, branch-led world. This mismatch constrains innovation, agility, and resilience, and our research confirms legacy cores are one of the biggest obstacles to modernization.

Banks that thrive today are those that can adapt rapidly: launching products in days, integrating partners seamlessly, redesigning journeys quickly, and scaling without friction. Recognized by analysts and proven by banks of various shapes and sizes, composable banking has emerged as a defining architectural strategy.

56%

As banks work to modernize their legacy systems and processes, more than half encounter challenges with the time it takes to fully migrate to new systems.¹

¹Source: Hanover & Temenos 2025 Survey under 400+ banking executives 'Modernizing Banking Solutions'

The composable modernization journey: turning complexity into modular control

Banks with more complex technical landscapes often consider carving out high-value domains like payments or product engines and rebuilding them as independent components with clear boundaries, dedicated data stores, and headless interfaces. This approach reflects modern architectural thinking rooted in packaged business capabilities and microservices principles. Each module operates as a self-contained, high-efficiency capability that progressively reduces reliance on legacy systems and supports adaptable, future-ready architecture.

A composable banking approach to core banking architecture offers complex banks a practical path to modernization without the disruption associated with full-stack replacement. By structuring the landscape around discrete, high-value capabilities, banks can innovate rapidly while progressively reducing their reliance on legacy systems. At the same time banks can centralize functionality like pricing and party management outside the core systems to gain control of critical elements that, today, are usually scattered and duplicated across existing systems.

This kind of architecture is intentionally loosely coupled, flexible, and headless, enabling real-time operations through APIs and event-driven patterns. This path supports specialized fit-for-purpose functionality rather than requiring extensive customization to meet advanced banking requirements.

For institutions that must balance change with operational stability, composability also enables incremental upgrades. Individual components can evolve independently, maintaining backward compatibility and minimizing integration overhead. This ensures that core capabilities remain current while limiting disruption to business as-usual activities.

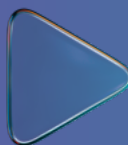
Combined with cloud native and microservices based foundations, this approach enables banks to scale individual modules as processing volumes shift, while improving resilience across the broader architecture. A key consideration in more complex core landscapes is how product and customer data are consistently managed across the broader architecture. When banks decouple ledgering from product systems, banks can significantly contribute to consistent, real-time data that enables a single customer view and support continuity across core system as positions are always available independent core systems.

With data expectations rising, composable architecture also enables real-time data flows, personalized interactions, and seamless customer journeys, supporting deeper insight and more tailored propositions.

In summary, especially for larger or more complex banks, this approach offers a controlled, low-risk pathway toward a modern, resilient, and continuously improving technology estate.

FROM:

Core monoliths built on legacy code, with tightly coupled products, limited transaction processing scaling, fragmented data — undermining resilience, upgrades, slowing time to market, and limiting a unified customer view.



TO:

Composable architectures, built around real-time, modular service domains, form a critical foundation for long-term agility, data consistency, and architectural longevity, to get ready for AI adoption.

[Learn how you can leverage Temenos Composable Capabilities Today](#)



The Point solution approach to accelerate and augment

Rather than re-platforming the entire core, this approach enables banks to decouple and modernize a specific functional domain—such as payments, or fraud detection—while existing core systems continue to operate or are modernized in parallel. Point solutions are therefore well suited to situations where modernization is driven by a defined business objective, regulatory requirement, or growth initiative, rather than the need for broad architectural change.

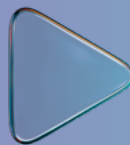
In practice, banks frequently use point solutions to support entry into new markets or business segments, where speed, differentiation, and compliance are critical, or to introduce capabilities not yet available within

their current systems. This often includes services that augment core and payment processes, such as fraud detection, card services, identity verification, or risk management.

By focusing on discrete capabilities, banks can apply modern integration and testing techniques to maintain a resilient, agile, and secure technology landscape. This is particularly important as point solutions at the edge of the core typically evolve faster, reflecting rapid digital innovation and regulatory change. As a result, banks can better manage transformation risk while delivering tangible, near-term business outcomes.

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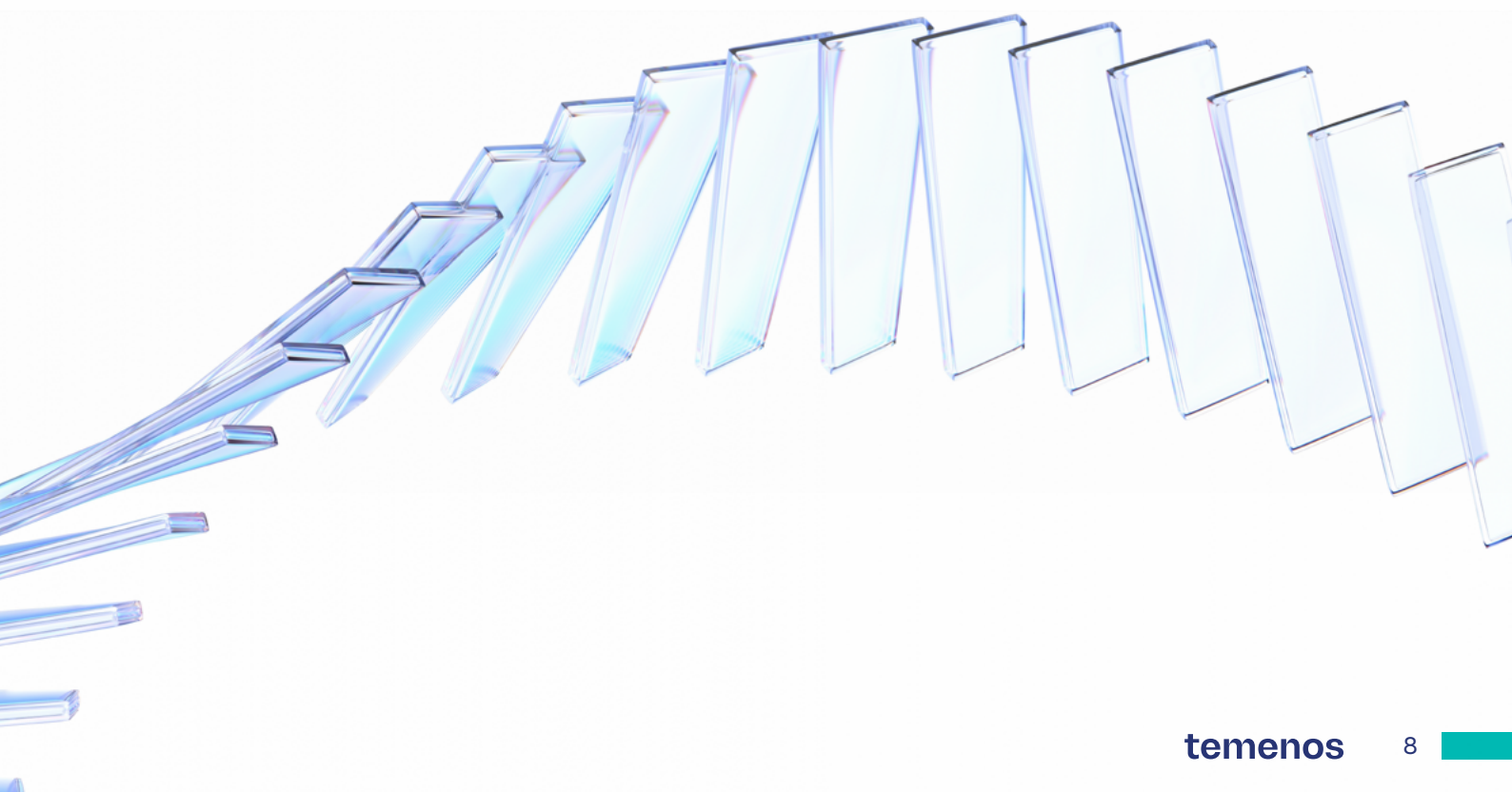
Limited capabilities in existing systems need heavy change to cover a specific capability, that possibly depends on parallel changes and transformation projects that impact time-to-value.



TO:

Adopt ready for use and proven capabilities as separate, upgradable solutions to augment the landscape with a modern capability in a limited time span for rapid time to value.

[Learn how you can leverage Temenos Solutions](#)





The SaaS-led modernization journey: Minimize time to value, maximize client focus

Let's start with what SaaS delivers: Banks get direct access to a banking platform and configurable software – without the process of deploying, maintaining or running the underlying software and infrastructure themselves:

- One service to configure financial products, up to end-to-end banking
- One toolset for integration and extension across capabilities to diversify
- One proven governance model
- Predictable upgrade paths for the future

At Temenos, we see SaaS as a key approach to reducing complexity, lowering costs, and shortening delivery cycles, making it well suited for banks seeking maintainability and predictability.

While in-house managed core and digital applications often require significant effort to deliver consistent experiences, SaaS enables banks to leverage proven capabilities and processes through a single service. This allows banks to easily launch competitive banking offerings in days or weeks, rather than months or years. And by adopting a standardized delivery model, banks also gain greater predictability in how these capabilities are onboarded, how they evolve, and how they are supported.

But as mentioned earlier in the paper, many decisions around modernizing critical banking processes have far-reaching implications. Deciding to consume Software-as-a-Service might take this to another level: this is not a technical or operational decision, but a strategic, boardroom-level decision. It goes beyond

architectural designs and functional requirements, as it also affects how critical processes are governed and how the organization is structured around them. For banks, SaaS is a strategic choice and an opportunity to organize around business outcomes, rather than managing the mechanics.

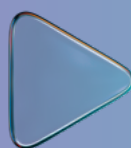
Today, many banks still run core systems on-premises, and while moving workloads to the cloud offers clear benefits, it also introduces new demands for governance, skills, and staffing. This is where SaaS is an appealing alternative to leverage the benefits of the cloud, but without the need for deep additional focus on running the underlying technology, as this is provided by the vendor in partnership with the hyperscalers: Expertise, cloud platform management, operations and related manpower are built into the service, reducing upfront investment, and the need for large technical and operations teams.

What remains critical for SaaS, however, is that material service provider arrangements supporting critical banking processes require a clear and well-established governance model. As such, banks need mindful that inclusive governance—spanning business, technology, risk, compliance, legal, security and third-party providers—is essential to maintain effective oversight, operational resilience, and regulatory confidence.

In summary, while adopting SaaS requires a mindset shift in how banks work with technology, it offers a very powerful way to accelerate core banking modernization, reduce technical and organizational complexity, speed up the delivery of change, and respond more quickly to evolving customer demands.

FROM:

Running technology in-house with scarce resources, split between maintaining outdated systems and governing manual processes—further constrained by complex dependencies, product limitations, and performance issues.



TO:

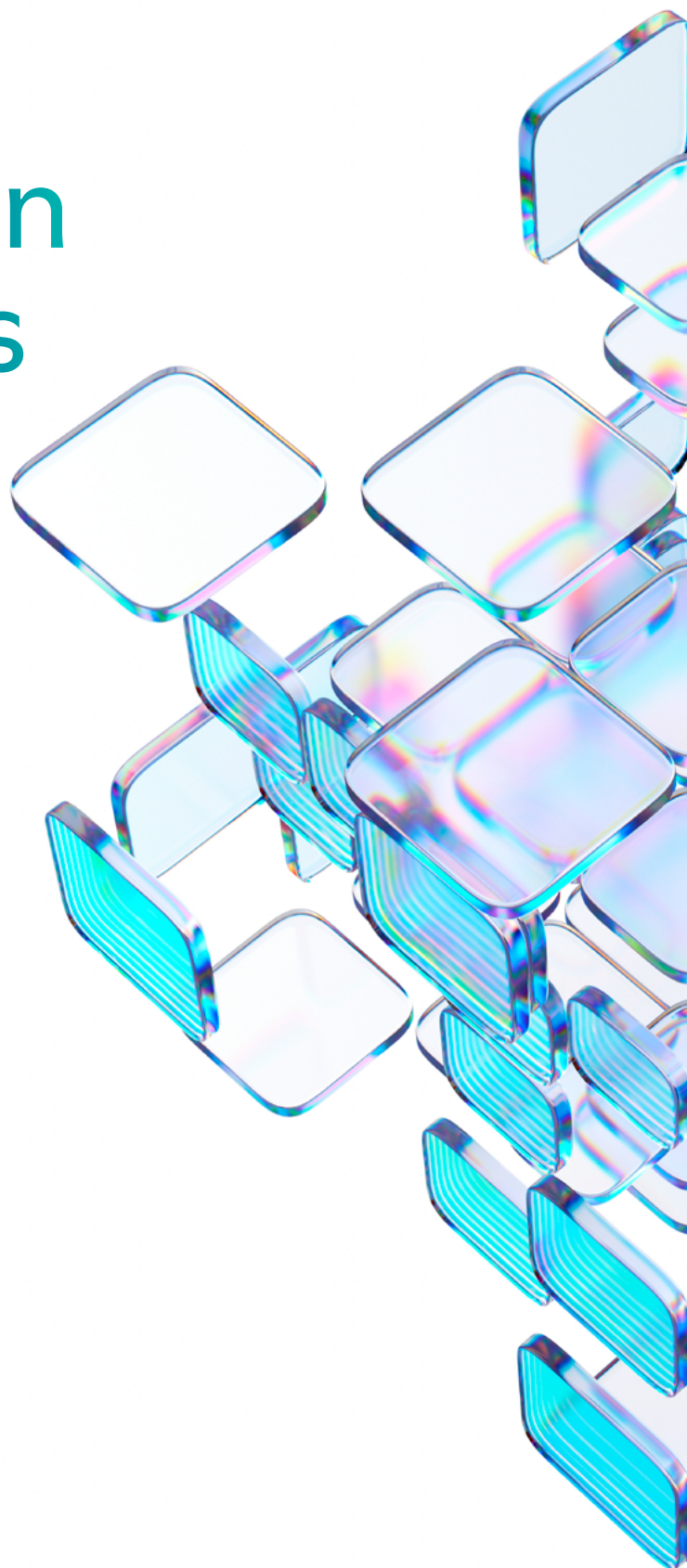
Consuming a banking-grade service for critical banking capabilities through a managed, as-a-service model, delivered on an elastically scalable and resilient cloud platform—enabling rapid product launches and allowing banks to focus on customers rather than running technology.

[Learn how you can leverage Temenos SaaS](#)

Get started by delivering progressive modernization with Temenos

As this paper might only mark the beginning of your core modernization journey, we want to emphasize that our modernization paths are grounded in Temenos' 30+ years of innovation and long-standing commitment to the banking technology industry. With more than 950 banks using our core banking software today, it is safe to say that we have witnessed the full spectrum of core banking transformation—across markets, maturity levels, and operating models. This depth of experience gives us a clear understanding of what drives successful modernization and where organizations most often encounter challenges.

Drawing from these insights, we have developed the Temenos Services catalogue, designed to support banks through assessment, strategy, architecture mapping, integration analysis, and end-to-end transformation initiatives. These services enable predictable modernization aligned to each bank's operating model and priorities, reflecting proven industry approaches that reduce both execution and transformation risk. For more information, please visit our [Temenos Service webpage](#).





Take-aways for Progressive Core Modernization



Core modernization has become unavoidable for banks

Without a modern core foundation, investments in personalization and AI remain constrained, delivering incremental gains at best while structural limitations persist. At the same time, trust is fundamental in banking, and the technology foundation beneath it must be equally robust. Legacy systems undermine that foundation—impeding customer experiences, innovation, resilience, and risk management—making modernization essential for long-term competitiveness.



Progressive modernization gives banks control to shape their journey

Each bank must define its own path based on strategy, risk, and context: core modernization is not about rigid adoption of specific tactics, composability, SaaS or innovative solutions in isolation, but about deciding and combining how pragmatic approaches can deliver the business value for progressive growth, with aligned partners, delivery models, and stakeholders.



Clarity of direction turns core modernization into momentum

Banks must define their business north star, understand their technical debt, select the right architectural and data model, establish priorities, clear governance and operating structures, and determine how core data integrates into the wider enterprise landscape.



Progressive paths unlock safer, faster modernization

Progressive modernization enables banks to evolve safely through composable architectures, targeted point solutions, or SaaS led platforms. Together or separately depending on the context, these paths reduce legacy complexity, accelerate time to value, and align investment with business priorities. By choosing and combining approaches based on starting point and ambition, banks modernize with control, resilience, and outcomes.



The end goal is a resilient, adaptable, data-led architecture

Next-generation architectures must support real-time operations, interoperability, elastic scaling, rapid integration, and data-driven intelligence—whether embedded within the core itself or across the surrounding application landscape. Composable architectures, built around real-time, modular service domains, form a critical foundation for long-term agility, data consistency, and architectural longevity, which will be critical in the AI era. SaaS can further amplify this by reducing operational burden, accelerating upgrades, and delivering these capabilities as resilient cloud-based services—allowing banks to modernize at pace while maintaining full focus on their customers.

What's next?

Modernizing the core is ultimately about building the foundation for the operating model and architecture your bank needs for the decade ahead— by building through composable capabilities and leveraging platform adoption. Striking the right balance is key, and if you are defining your future state now, Temenos can help assess your baseline, clarify architectural direction, and co create a modernization roadmap aligned to your ambitions.

Get started: Talk to one of our Progressive Modernization Experts to explore how your journey starts.



Working closely with Temenos, Canada's EQ Bank completed the upgrade of Temenos Core Banking and the migration to Temenos SaaS in just 12 months.

"The support from Temenos accelerated the changeover, and because we run the systems with minimal customizations it minimized any complexity. Our learning curve on the Temenos SaaS was quick and easy."

Dan Broten,
Head of EQ Bank

[Learn more](#)



Vietnam's most established commercial banks with 6 million retail customers and 100,000 corporate clients, needed to move forward to modernize their legacy core. With Temenos, MSB is now launching complex new products to market in a matter of weeks instead of months.

"We chose Temenos because it gives us a suitable solution with rich functionality, scalability, flexibility, and a strong partner for now and the future."

Mr. Nguyen Hoang Linh,
CEO at MSB

[Learn more](#)



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About Temenos

Temenos (SIX: TEMN) is a global leader in banking technology. Through our market-leading core banking suite and best-in-class modular solutions, we are modernizing the banking industry. Banks of all sizes utilize our adaptable technology – deployed on-premises, in the cloud, or as SaaS – to deliver next-generation services and AI-enhanced experiences that elevate banking for their customers. Our mission is to create a world where people can live their best financial lives.

For more information, please visit www.temenos.com