

Setting the pace for *intelligent* transformation

Four steps banks can take to build a roadmap to AI adoption success

Seemingly overnight, AI in the banking industry has catapulted from limited adoption to a competitive imperative. This is particularly true of generative AI, which 80% of bank CXOs who participated in Capgemini's [World Retail Banking Report 2024](#) believe is a significant leap with a potential that no one can ignore.

In brief

- AI in the banking industry has catapulted from limited adoption to a competitive imperative, but impediments remain.
- To help overcome the hurdles, banks should develop an AI adoption roadmap that includes cloud, data-as-a-product, data mesh, LLM selection, and effective governance.
- The benefits of building a holistic AI roadmap are considerable as enterprise-wide AI is a steppingstone to autonomous and intelligent banking, which takes banks beyond consuming AI to wielding it for competitive advantage.

Industry optimism for AI is in no small part due to the inefficiencies facing banks every day. In quantitative terms, 70% of bank employee time is allocated to operational activities and only 30% to customer interactions, leaving substantial opportunities for AI.¹

Still, significant impediments to intelligent transformations remain. These include legacy systems, fragmented data, regulatory challenges, skill shortages, and return on investment concerns.

In this article we explore how banks overcome such barriers by developing an appropriate plan to guide AI adoption initiatives in order to positively benefit the bottom line.



Building a strategic AI roadmap

As discussed in Capgemini’s [World Retail Banking Report 2024](#), leading CXOs worldwide have already identified three pivotal horizontal processes, spanning the entire retail banking spectrum, as focal points for the intelligent transformations: intelligent document automation, intelligent call centers, and workforce productivity co-pilots.

However, the report also revealed that 96% of banks score low on the AI readiness scale, as measured from both a technology and a business perspective. On a key readiness factor, establishing an AI adoption roadmap, only 6% of banks have an appropriate a plan.

To help banks catch up, this article discusses the elements

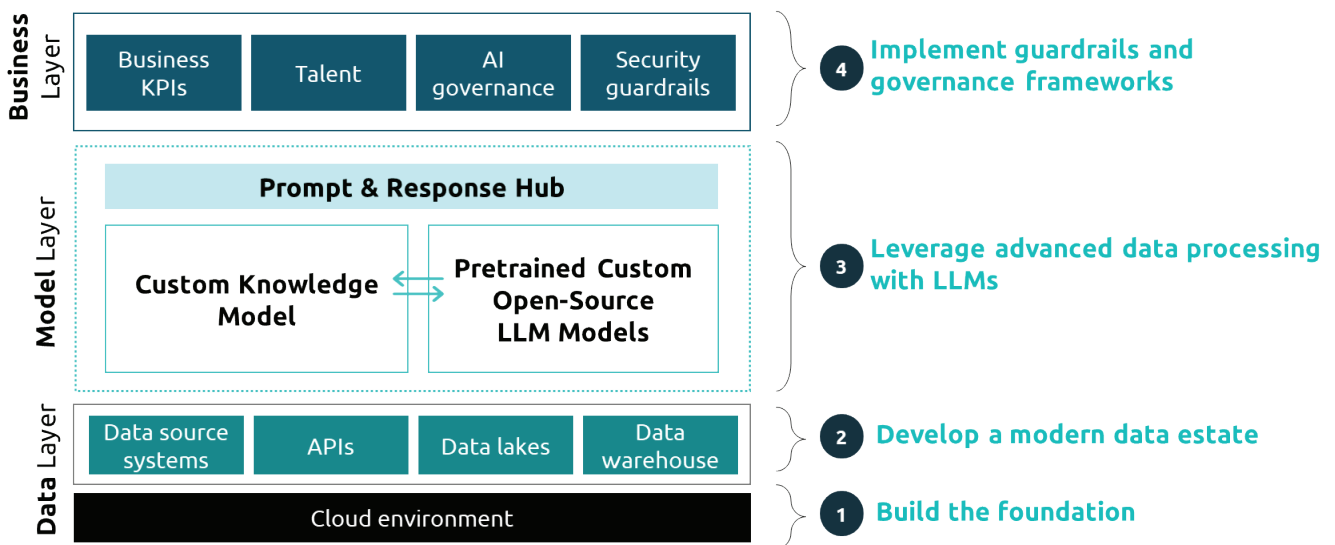
required for building an intelligent transformation roadmap. We recommend using a bottom-up approach (Figure 1) to create a plan that addresses data, model, and business layers using the following steps:

1. **Build a cloud foundation**
2. **Develop a modern data-as-a-product estate using data mesh**
3. **Select the right Large Language Model (LLM) approach**
4. **Establish effective governance**

For a greater understanding of what each element entails, let’s discuss each in depth.

Only **6%** of banks have an appropriate plan for establishing an AI adoption roadmap.

Figure 1: Four strategic essentials for an intelligent transformation roadmap



Source: Capgemini Research Institute for Financial Services Analysis, 2024

1. Build a cloud foundation for agility and scalability

As the most appropriate infrastructure for providing high-performance scalable computing resources, cloud technologies lie at the heart of enterprise AI adoption.

Although 91% of financial services firms have embarked on their cloud journey,³ adoption has been uneven. For example, industry experts and analysts suggest that less than 30% of banks have moved their core business applications to a cloud platform.⁴

Gaining the desired benefits from AI initiatives requires accelerating cloud migration efforts and establishing a sufficiently robust, agile, and secure foundation for meeting AI's computing capacity, speed, and data protection requirements.

“A key variable [in developing our AI roadmap] is to allocate cloud computing resources to generative AI use cases. The convergence of generative AI and cloud economics offer a path to reduced costs and scaled adoption.”

- **Vincent Kolijn**, Head of Strategy and Transformation, Retail, Rabobank, Netherlands²



2. Develop a modern data-as-a-product estate using data mesh

Exacerbated by legacy infrastructure, departmental database ownership, and regulatory demands, data silos remain a significant challenge for banks. Fortunately, data mesh architecture now offers a solution by providing technology layers that work across data silos (Figure 2).

Data mesh treats data as a stand-alone offering with a value proposition that is called data-as-a-product. With this approach, data management is decentralized and occurs within business silos, but is unified by standards, governance, and extraction technologies that make data available to AI applications on demand. Use data mesh to:

Provide real-time data access.

Enables creating a data marketplace for collaborative data

consumption by multiple business lines and AI applications.

Simplify data ownership and management.

Enables each banking domain to continue organizing, owning, and managing data while improving data access, utilization, and data-driven innovation across a bank's entire enterprise, without requiring significant overhauls to existing data infrastructure.

Ensure well-governed data diversity.

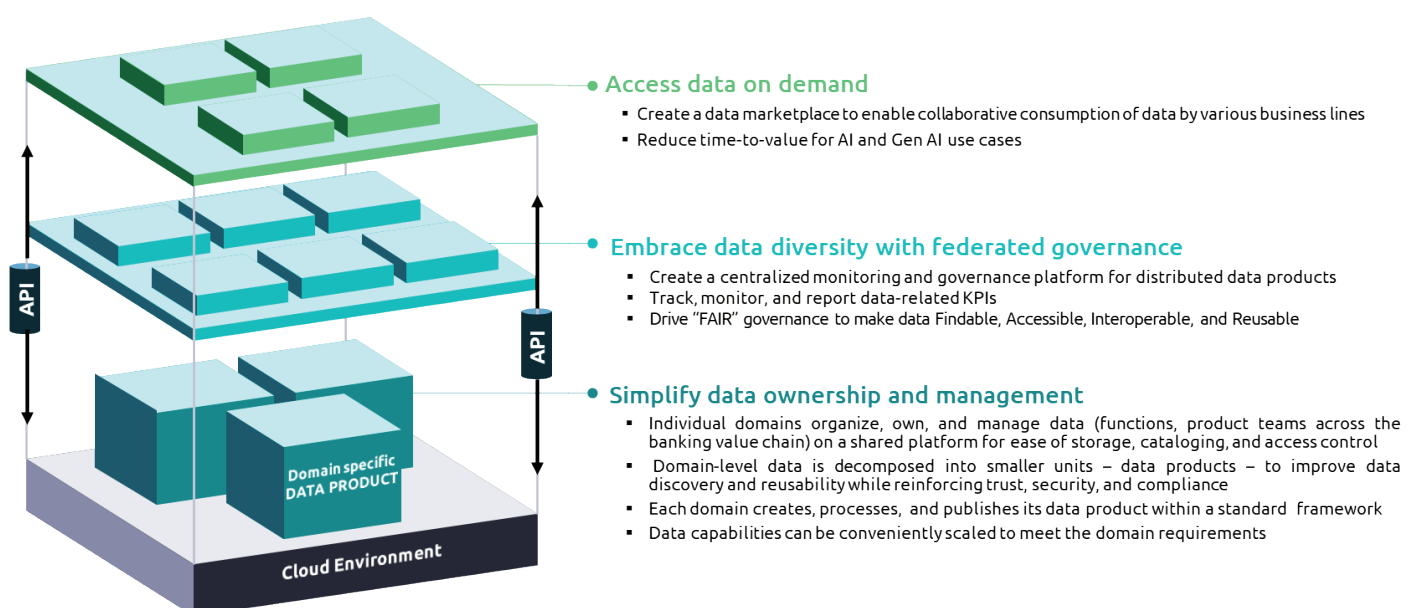
Enables making data FAIR (findable, accessible, interoperable, and reusable) while applying appropriate key performance indicators (KPIs) to govern and protect data, which helps assure its integrity for use by AI applications.

As noted in the Capgemini [World Retail Banking Report 2024](#), leading banks like JP Morgan Chase and Fifth Third Bank in the US, Saxo Bank in Denmark, ABN AMRO in the Netherlands, and numerous others have successfully adopted data mesh architectures.

“Banks facing the challenge of legacy systems must strategize on how to adopt and scale AI effectively. It's about crafting a roadmap that navigates the hurdles legacy systems pose.”

- Steven Cooper, CEO, Aldermore Bank, UK⁵

Figure 2: Modern data-as-a-product estate using data mesh



Source: Capgemini Research Institute for Financial Services Analysis, 2024.

3. Select the right Large Language Model (LLM) approach

Shaping the algorithm layer for an AI initiative starts with selecting the right large language model (LLM). Typically, the decision is shaped by the phase of an AI journey (Figure 3).

Exploratory phase.

Many banks purchase off-the-shelf solutions such as chatbots, fraud detection platforms, and others that cater to specific needs when exploring AI. Off-the-shelf solutions provide immediate availability but limited control.

AI scaling phase.

Banks most frequently partner with LLM specialists during scaling as a balanced approach to accelerating AI development and gaining domain expertise. This nets an AI

calibrated using a bank’s internal data, enabling fine-tuning for the delivery of superior, customized human interactions.

Industrialization phase.

Although only about 10% of CXOs survey for World Retail Banking Report 2024 have chosen to build a custom LLM from scratch, this industrialization phase option provides the greatest ownership and customization. Unsurprisingly, this path also requires substantial resource investments.

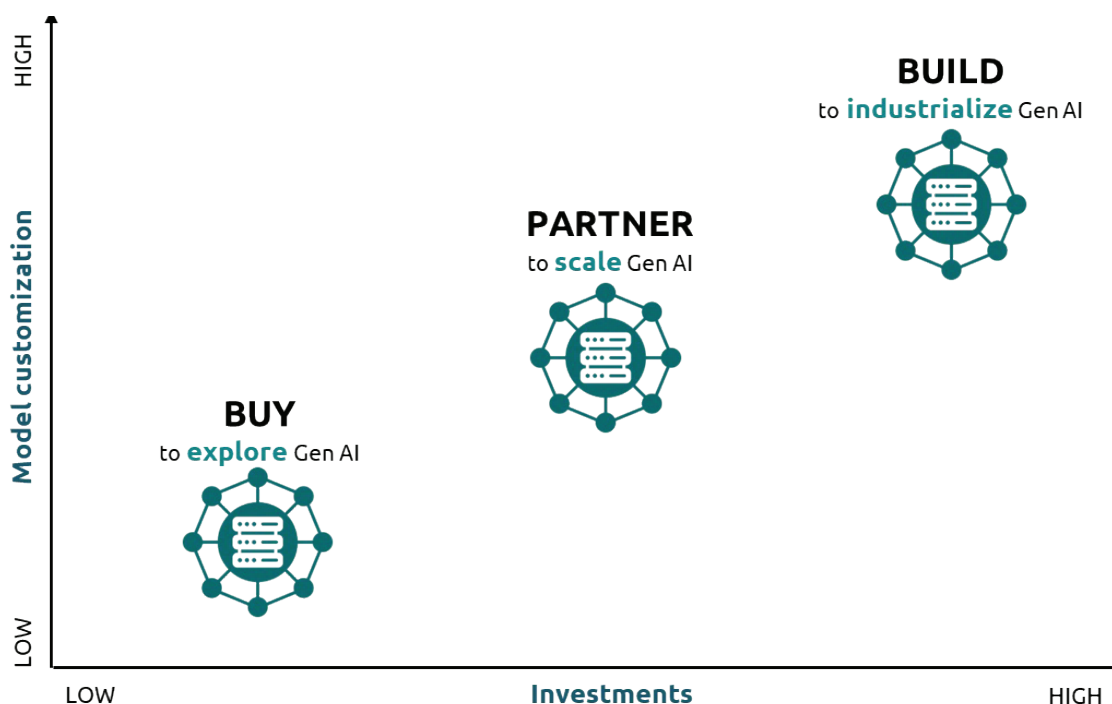
Regardless of which route a bank chooses, success requires a long-term strategic vision. This includes a comprehensive assessment of specific needs, available resources, model capabilities, risk

and compliance considerations, and cost analysis. Once an AI application is rolled out, monitoring it for continuous improvement and course corrections are also critical for achieving desired business results and goals.

“Banks navigating the evolving generative AI landscape should weigh three approaches: building a custom LLM, considering off-the-shelf generative AI, and partnering with specialists.”

- Pierre Ruhlmann, Chief Operating Officer, BNP Paribas, France⁶

Figure 3: Three typical approaches to LLM development



Source: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report CXO survey.

4. Establish effective governance

As AI applications evolve rapidly, they quickly exceed the limits of human understanding and make decisions that are difficult for humans to interpret, much less govern. Mitigating this phenomenon requires diligently managing and monitoring AI applications to ensure decisions are explainable. Explainable AI ensures humans can quickly understand outputs and course correct as necessary.

Beyond explainability, it's vital for banks to monitor and manage several other categories of AI-associated risks. These include biased and discriminatory outputs, hallucinations with inaccurate

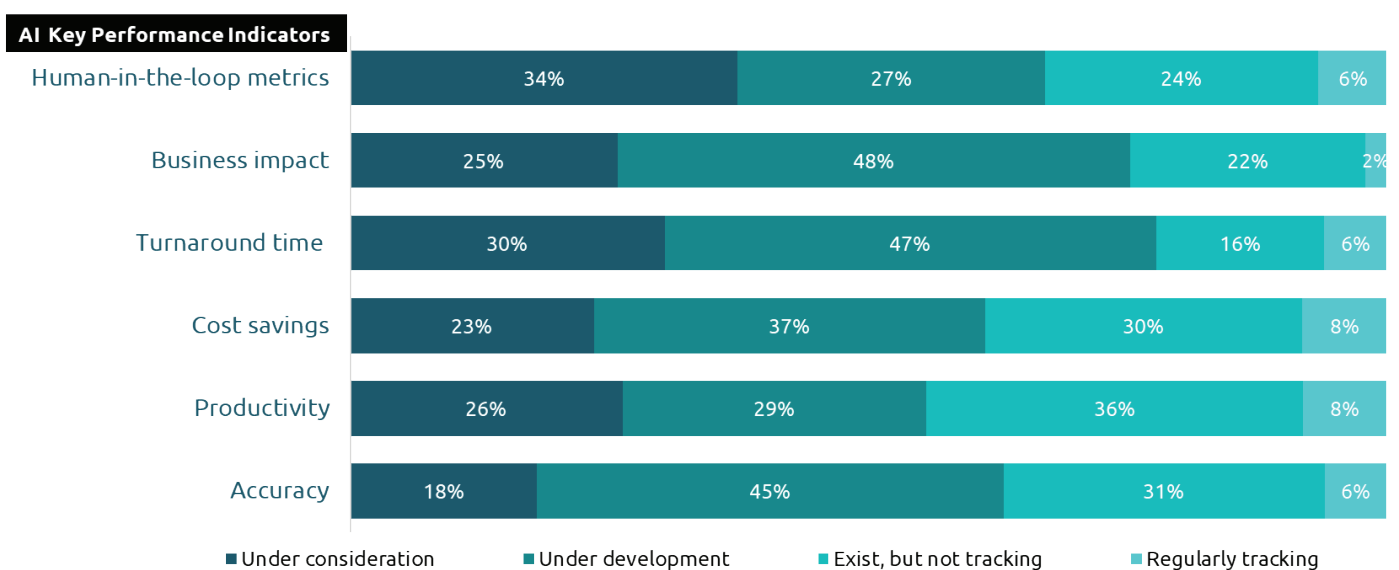
results, privacy intrusions, and malicious use.

Naturally, developing and continuously evolving a robust and comprehensive set of KPIs is necessary for effectively governing AI and generative AI applications. Here, banks are significantly lagging. Capgemini's [World Retail Banking Report 2024](#) discovered only 6% of banks have established KPIs to measure generative AI impact and maintain continuous monitoring (Figure 4). Clearly, focusing greater attention on KPI development and implementation is necessary for minimizing risks and unintended consequences.

“Explainable AI (XAI) in banking is essential to mitigate bias risks and enhance trust. It accelerates AI adoption, ensuring transparent decisions, compliance, and collaborative industry implementation.”

- **Cormac Flanagan**, Global Head of Product Management, Temenos, Ireland⁷

Figure 4: Banks are lagging KPIs for governing AI and generative AI



Source: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report CXO survey.

In conclusion

Take a holistic road mapping approach

Although each of the roadmap elements discussed here have technology in common, developing a holistic plan also requires including human-centric aspects within each for the four elements.

Be certain to address factors like change management, upskilling, and cultural readiness as they are often the make-or-break activities for successful transformations.⁸



Achieving the ultimate AI goal: autonomous banking

Although today's fledgling AI initiatives are already generating considerable benefits, enterprise-wide AI is a steppingstone to autonomous and intelligent banking. When banks reach this level of maturity, they move beyond consuming AI to wielding it for competitive advantage.

Current examples of self-driving offerings include BBVA's "Bconomy" and Santander Bank's partnership with Personetics, which demonstrate how hyper-personalized customer journeys and omnichannel engagement can deliver true customer centricity.

To begin achieving your bank's AI goals, start with a comprehensive roadmap for navigating the AI journey. By embracing modern technology approaches, addressing key data hurdles, and establishing effective governance, banks can successfully complete their intelligent transformation journeys and ultimately leverage AI to redefine the industry's future. It's an exciting time in banking for all.

Endnotes

¹ [Capgemini](#). "World Retail Banking Report 2024;" March 5, 2024

² Ibid.

³ [Capgemini](#). "World Cloud Report – Financial Services 2023," November 16, 2023

⁴ Ibid.

⁵ [Capgemini](#). "World Retail Banking Report 2024;" March 5, 2024

⁶ Ibid.

⁷ Ibid.

⁸ [Capgemini](#). "Unleashing confidence in AI: A playbook by Capgemini Generative AI Lab"; March, 2024

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