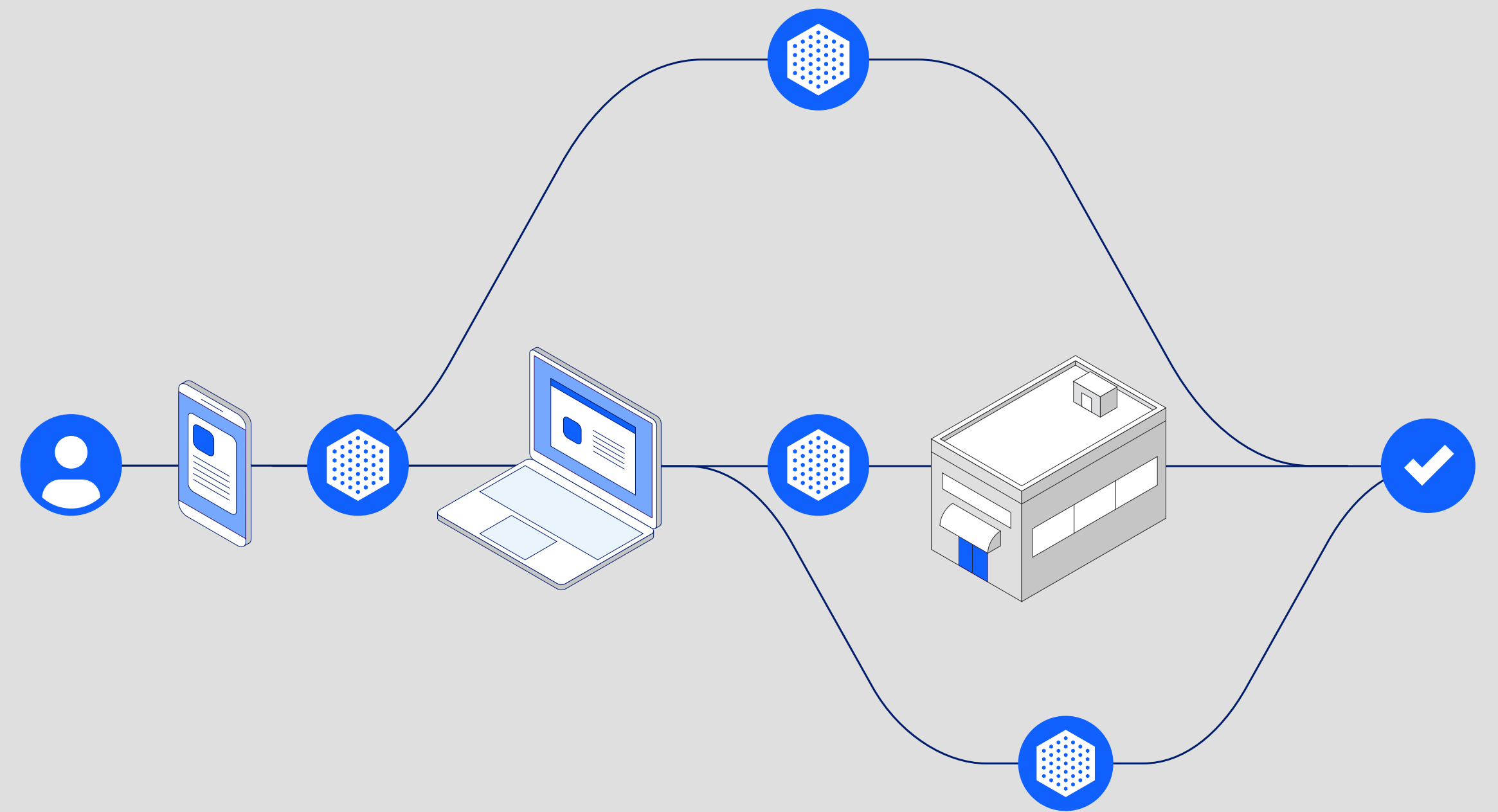


# Put AI to work for customer service in banking

AI

Academy



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Ready to begin?





## Why AI is essential to transforming customer service in banking

Today's banking consumers not only demand superior service, but they want their bank to know who they are, what they want, and when and how they want it.







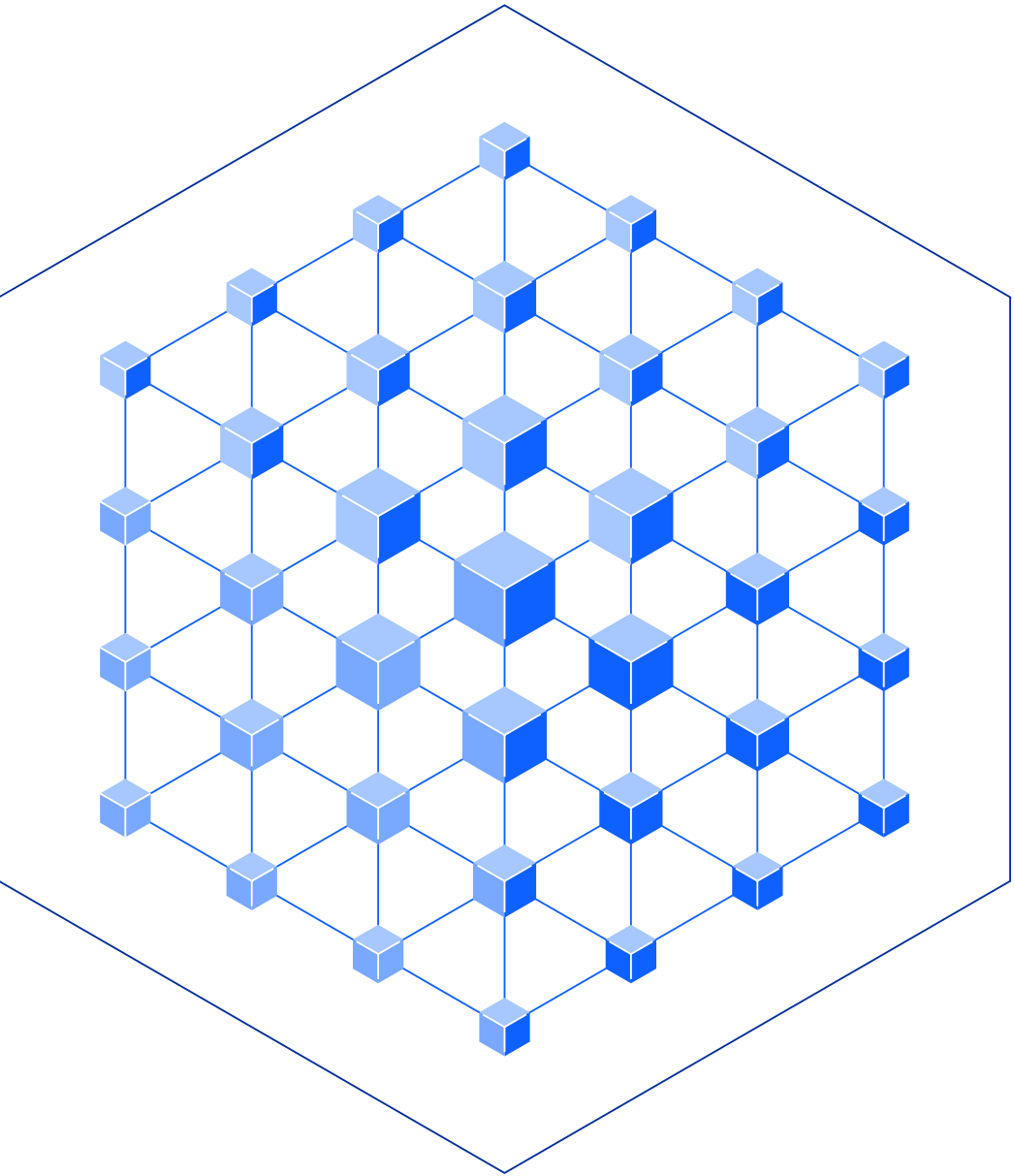
In the past year alone, 25% of customers switched banks, and over a third switched their insurers and wealth managers.<sup>1</sup> Across all three of these financial sectors, the top reason customers give for switching is a desire for a better digital experience. A great digital experience isn't just nice to have—it's a necessity.

With pressure from all sides to fulfill rising customer expectations, build loyalty, reduce agent turnover, lower costs and increase revenue, solutions that take advantage of traditional and generative AI offer great promise to banking and financial services institutions.

At present, customers indicate that their banks' digital experiences need improvement. Customers expect to be able to manage a large portion of their financial lives online, especially when it comes to more routine tasks. That's where generative AI can have an impact.

Generative AI is a class of AI algorithms that can produce various types of content, including text, imagery, audio and synthetic data. While a traditional AI machine learning (ML) model is typically trained to perform a single task using labeled data, a generative AI foundation model can be trained on large quantities of unlabeled data using self-supervision. More detailed models tailored to specific use cases or domains can be built on top of a foundation model, making it more scalable and cost-effective than starting from scratch.

By combining both traditional and generative AI, banks are now enabled to deliver on customer service aspirations that may have seemed unthinkable before. Executives are already on board—85% of surveyed CEOs say generative AI will be interacting directly with customers in the next 2 years.<sup>2</sup>



Generative AI

AI has the potential to solve many customer service challenges, from upgrading customer self-service to supporting agents and empowering them to focus on more complex inquiries and improve response times and resolutions. AI can also help optimize contact centers so that they can not only resolve customer issues but become a source of new revenue by helping to increase customer loyalty and trust, offering personalized account recommendations, and even developing new offerings.

However, it’s essential that banks interested in transforming their customer service with AI have a strategic vision and appropriate governance in place. You must determine how AI is being applied and scaled, and ensure that the bank’s data foundation integrates with existing technology platforms.

There’s no one-size-fits-all AI solution, so it’s imperative that banks focus on how AI can be used to address their specific challenges. When considering how to deploy generative AI within your institution, ask yourself these 3 questions.

- 1. How can AI help us create a competitive edge?** The more customized your AI models are to your core business priorities, the more effectively you can serve your banking customers and deliver real business value.
- 2. How do I scale AI across my organization?** To successfully scale your AI efforts, you need to use your bank’s quality data, wherever it resides, and tap into the innovation of the open-source community to use it effectively.
- 3. How do I advance trustworthy AI?** AI should be explainable, fair, robust and transparent. Engender trust by adhering to regulatory requirements and by safeguarding consumers’ privacy and data rights.



# The key to building responsible AI

While you're likely feeling pressure to accelerate the use of generative AI, you should take these key concerns about how AI is being used into account.

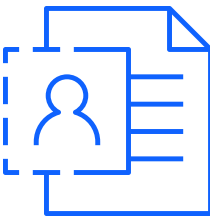


In its 2023 survey of over 3,000 CEOs around the world<sup>3</sup>, the IBM Institute for Business Value found that:

- 75% believe that competitive advantage will depend on who has the most advanced generative AI.
- 69% see broad benefits of generative AI across their organization.
- 56% say they are delaying major investments until they have clarity on AI standards and regulations.

IBM has been a trusted partner to banks and financial institutions for over 100 years and follows 3 core [Principles for Trust and Transparency](#) that guide how we handle client data and insights, and responsibly develop and deploy new technologies. These principles are even more critical in the age of AI.

IBM’s guiding principles  
for AI ethics



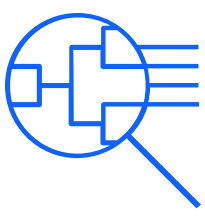
**The purpose of AI is to augment human intelligence**

We believe that AI should make all of us better at our jobs, and that the benefits of the AI era should touch the many, not just the elite few.



**Data and insights belong to their creator**

Client data is their data, and their insights are their insights. We believe that government data policies should be fair and equitable, prioritizing openness.



**Technology must be transparent and explainable**

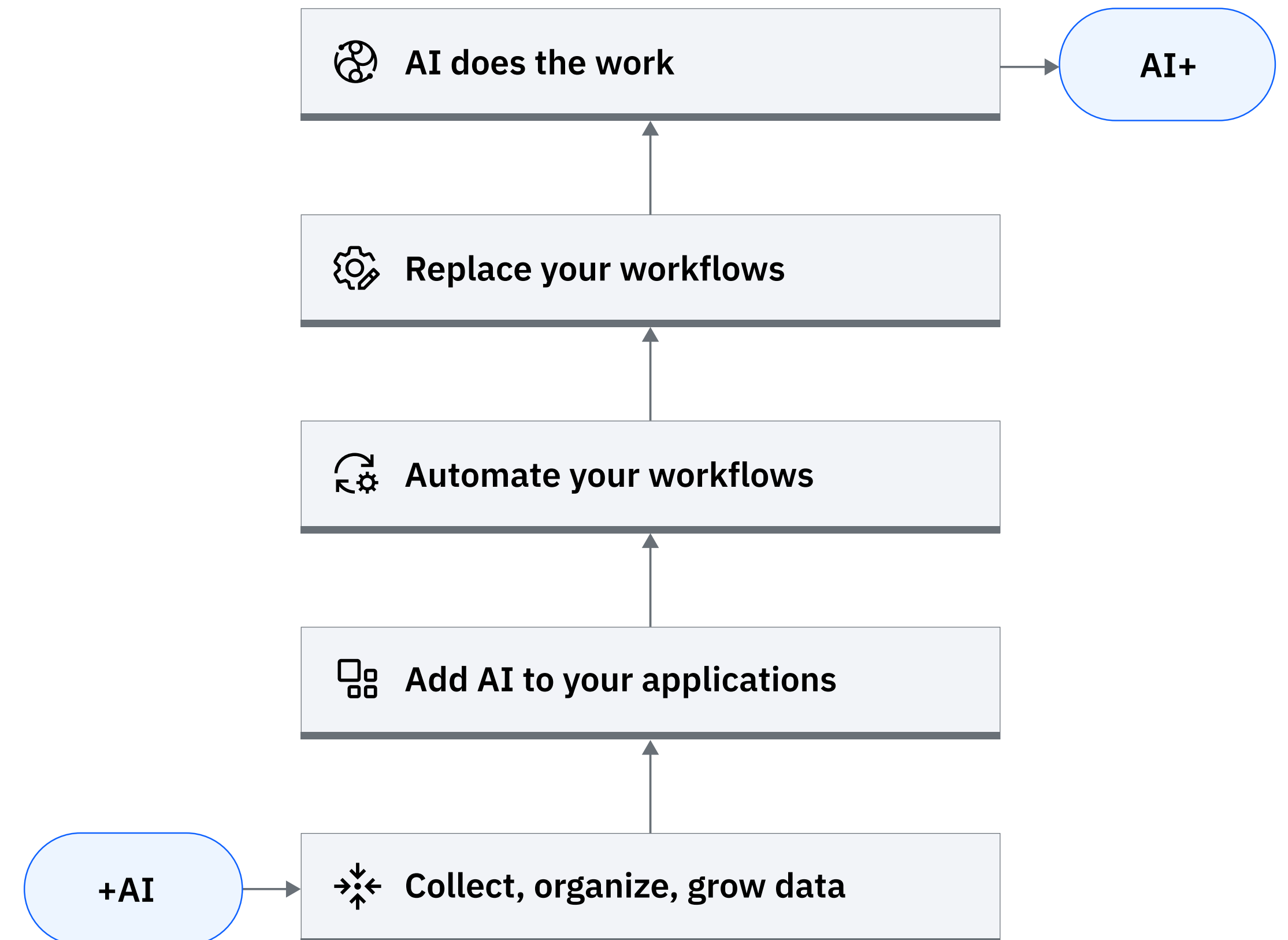
Companies must be clear about who trains their AI systems, what data is used and what goes into their algorithms’ recommendations.

## Moving from +AI to AI+

In the past, enterprises have approached AI as an add-on, with the end goal being digital transformation and cloud modernization.

Now, AI is becoming the centerpiece of enterprise transformation across industries. But harnessing the potential of AI to fundamentally transform banking services will require a mix of vision, technology, employee talent and skills, and change management. Banks will need to put AI to work at the strategic core of their institution—not just add it on to existing systems—to solve enterprise challenges and help achieve their short-term business objectives. It's time to move from applications +AI to AI+ applications.

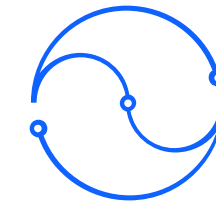
### The AI Ladder® in the modern day





# Combining traditional and generative AI

Many banks have been using AI chatbots in customer service for years, so it's important to understand the distinction between traditional and generative AI. You need the right combination of both to fulfill your customer service goals. In the case of chatbots, adding generative AI can transform a traditional AI-powered chatbot programmed with limited responses and learning into a responsive virtual assistant that learns as it goes.



## Traditional AI

- Analytics
- Machine Learning (ML)
- Deep Learning

Definition: Algorithms that can analyze content to make predictions and prescribe actions.

Tasks:

- Predict customer churn
- Track net promoter scores (NPS)
- Detect network anomalies
- Conversational AI for virtual agents and chatbots



## Generative AI

- Foundation models
- Large language models (LLMs)

Definition: Algorithms that can generate net new content and better understand existing content.

Tasks:

- Call summaries and analysis
- Personalized product, service or plan recommendations
- New product, service or plan development
- Customized explanatory videos for invoices
- Network optimization

## Putting generative AI to work in customer service

While the potential applications of generative AI span the entire customer service lifecycle, there are 3 areas in particular where the technology can be employed right now to help banks achieve their customer service aspirations.



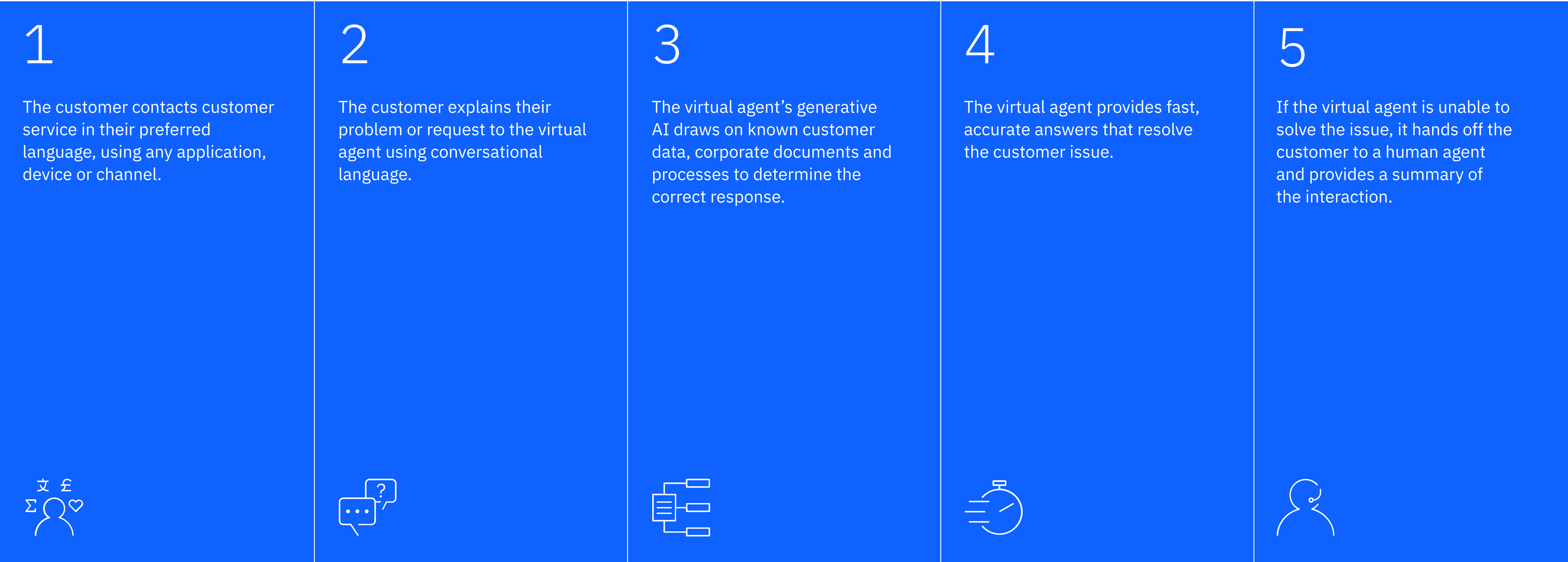
### **Customer self-service**

At the core of customer self-service is the desire to give customers the information and support they need quickly, enabling them to resolve common issues themselves so that human agents can focus on those issues that are more complex. And customers expect to be able to engage on their preferred device and channel, whether it's through a live chat, email or phone call on the company's website, apps or social media accounts.

Customer satisfaction depends on more than just delivering predetermined responses to common questions. Generative AI can take customer service to a whole new level, facilitating more personalized interactions. Virtual agents powered by generative AI for customer self-service can answer questions, but do so in the context of that customer, their account and their specific situation—taking into account implied nuances, such as the customer's sentiment, support history and banking relationship.



Customer self-service  
workflow

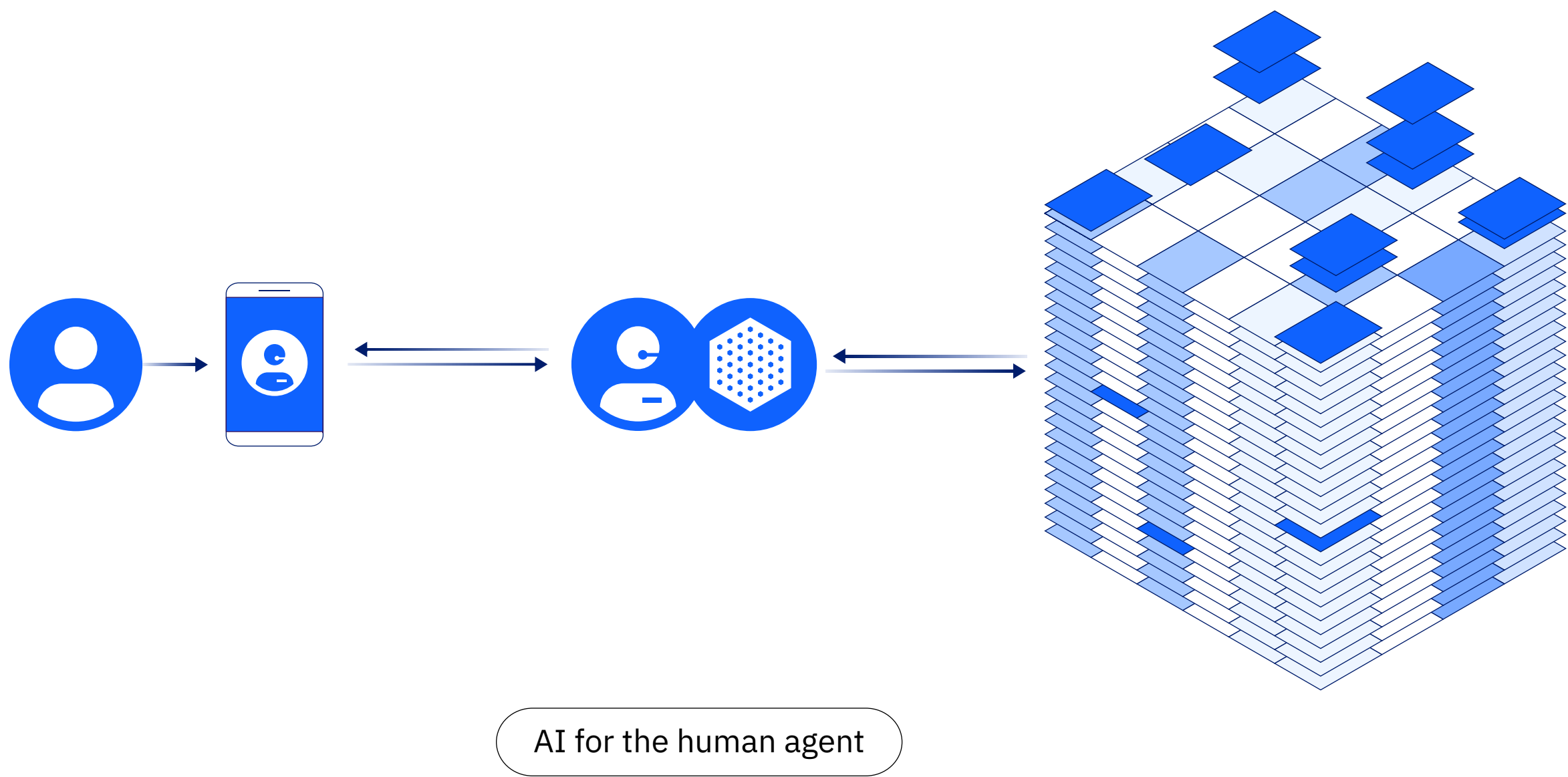




Self-service virtual agents can function as a single router to bring all your organization’s relevant resources together, from technology to data to personnel. Along with answering questions, AI can also enable virtual assistants to provide customers with interactive support for multistep or complex tasks. For example, a generative AI-powered virtual assistant might generate an entire conversation to guide the user through disputing a charge on your bank’s website.

Even when topics come up that the virtual agent can’t solve on its own, such as complex problems or sensitive topics, generative AI allows it to easily identify these queries and connect them with a human agent who can help. If escalated to a human agent, a summary of the conversation history can be provided so that they can seamlessly pick up where the virtual agent left off. With [IBM® watsonx Assistant™](#), a market-leading conversational AI solution, Brazilian bank Bradesco automated customer service with a 95% accuracy rate,<sup>4</sup> helping to improve productivity and issue resolution rates.





**The agent experience**

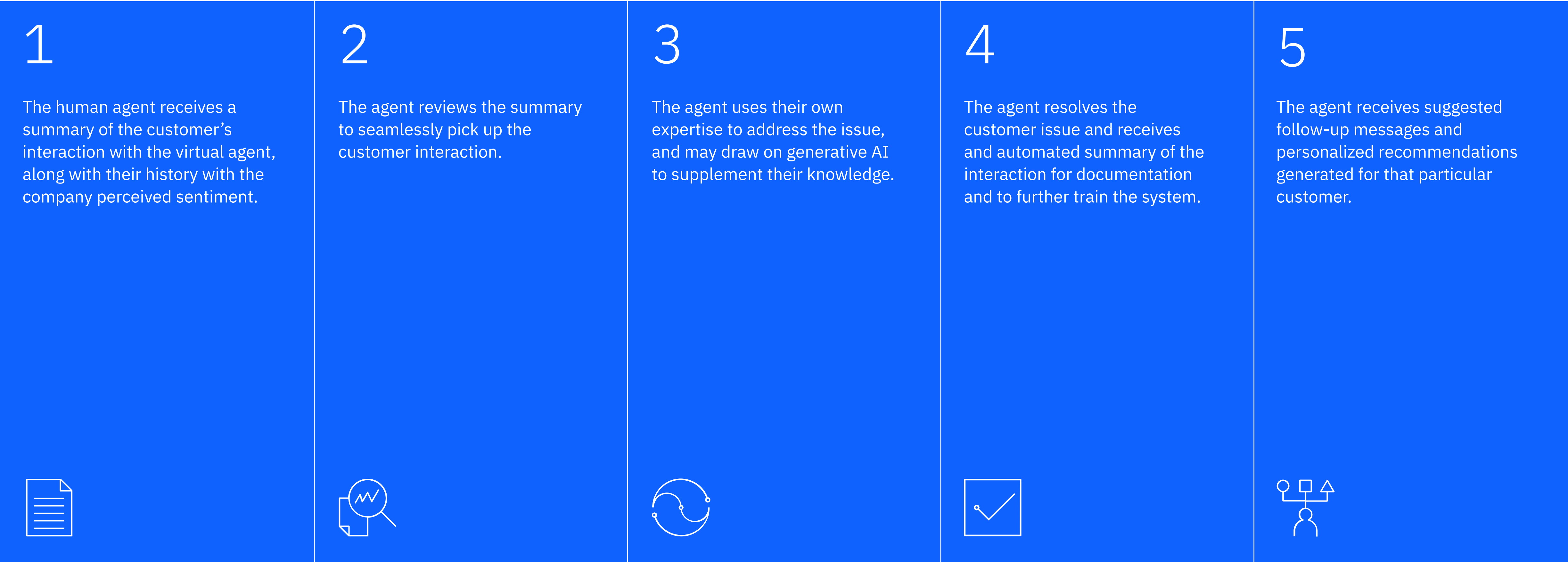
To build and maintain positive customer experiences and relationships, your bank must rely on your agents’ performance, productivity and knowledge. But do your agents have access to the most recent interactions with the customer? Do they have the ability to see a full view of the customer’s situation and banking history? Do they have an easy way to see that level of detail and take advantage of automated summaries so they can deliver seamless service and support? Can they automatically generate email responses? Generative AI can and that’s why it’s a game changer.

Recent research by the National Bureau of Economic Research (NBER) shows that when studied customer support agents were given access to a generative-AI-based conversational assistant, their productivity increased an average of 14%. Productivity was measured by issues resolved per hour. And the greatest impact

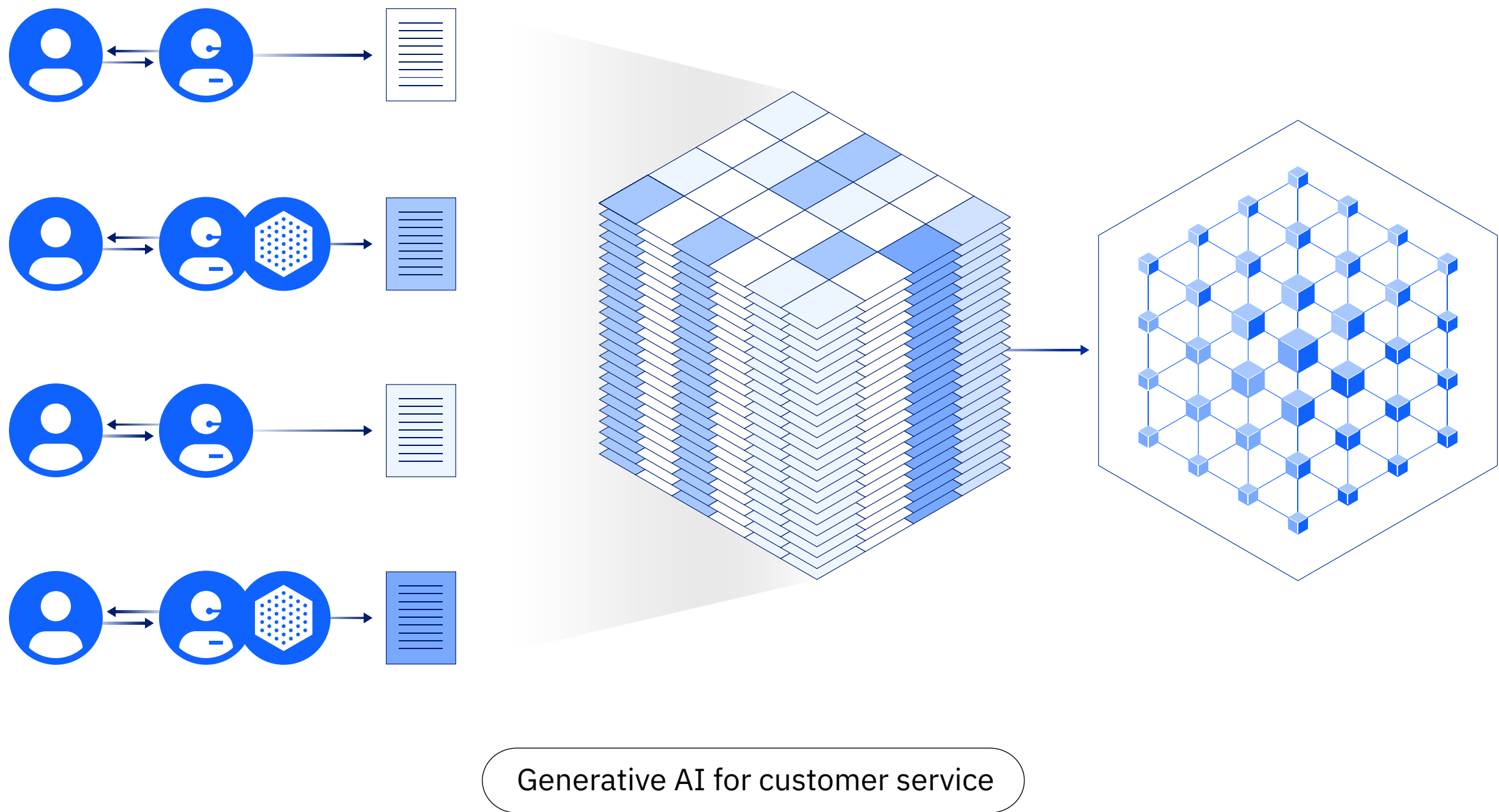
was on novice and low-skilled workers.<sup>5</sup> This finding suggests that generative AI could help companies train new agents more quickly and bring new hires up to speed with their more experienced colleagues. The study also found that agent assistance from generative AI improved customer sentiment, reduced requests for managerial intervention and improved employee retention.

Nearly two-thirds of CEOs (63%) surveyed by the IBM Institute for Business Value say that by the end of 2023 they’ll have already invested in generative AI use cases to serve agents directly.<sup>2</sup> This deployment of generative AI includes agent training and enabling them to interact directly with technical applications. The result is agents who are empowered to deliver improved assistance. For example, Citi used machine learning and natural language processing to build “the audit of the future.”<sup>6</sup>

Agent experience  
workflow







**Contact center operations**

Generative AI can help perform the repetitive tasks necessary to gather the data needed to optimize your contact center. With AI help, your agents have more time to focus on complex problems. From those data sets, generative AI can identify patterns and insights—and learn from the information it gathers. This capability could allow AI to optimize the network, personalize customer communications and recommendations, and even develop new products or services to potentially turn contact centers into revenue generators.

With targeted data collection, generative AI can help you understand customers and tailor recommendations, next-best offers and solutions based on their behavior and history with your bank. This type of personalization is designed to make customers feel valued and help increase their satisfaction and loyalty.

When NatWest Group implemented a digital mortgage support tool built with IBM watsonx Assistant, they saw a 20% improvement in customer loyalty, even before generative AI capabilities were incorporated.<sup>7</sup> This increase unlocks the potential for more revenue. In fact, according to a Forrester survey<sup>8</sup> of US credit card customers who reported feeling valued:

- 91% planned to stay with the brand
- 83% planned to purchase more from the brand
- 88% said they would advocate for the brand

Contact center operations  
workflow





## Taking the next steps

So, what's next when it comes to meeting your customer service aspirations with generative AI? We suggest using these steps as a compass as you embark on—or continue—transforming your bank's customer service.

### 01

#### **Define your customer service goals and priority use cases**

Let your bank's business strategy guide the AI strategy. Build a customer experience strategy and define the end goal of your service transformation and why you're trying to achieve it. Who is your target customer, what's the complexity of their problems and how do you resolve them? What differentiates your customer service from competitors? What key performance indicators (KPIs) are you going to use to track performance? Having a strategy that incorporates all these elements—and more—is critical to understanding your bank's costs, budget and future investment in service transformation.

Once this strategy is outlined, you can identify the best use cases to concentrate on for AI implementation and optimization. And remember that AI should be integrated into existing workflows and systems to automate and augment key processes—this element is what moving from +AI to AI+ is all about.

*For help with defining your bank's enterprise AI strategy and priority use cases, request an [AI banking strategy briefing](#) from IBM Consulting®. In addition to our customer service transformation experience, IBM Consulting has over 20,000 experts in AI and a dedicated Generative AI Center of Excellence made up of more than 1,000 professionals.*

### 02

#### **Identify the right data sets and model**

AI is only as trusted and accurate as the data that fuels it. Enterprise-ready data architectures are indispensable for enabling AI use across your financial institution. Be sure that along with quality data, models are receiving the right training so that they give banking customers accurate responses in a voice authentic to your brand.

*IBM Consulting data and AI experts can work with you to train, validate, tune and deploy AI models—both traditional and generative—powered by foundation models and industry data for models with the IBM [watsonx.ai™](#) studio.*

*Use the IBM [watsonx.data™](#) data store to scale AI workloads for all your data, anywhere. This fit-for-purpose data store is built on an open lakehouse architecture, supported by querying, governance and open data formats to access and share data across your enterprise.*

## 03

**Consider the ethics**

Create an end-to-end AI governance strategy to accelerate responsible AI transformation—which is especially critical for banking. AI ethics aren’t only about the models themselves; they’re essential to create a culture of AI ethics by establishing, publishing and enforcing bank-wide policies, practices and guidelines for all parties using the technology.

*The IBM [watsonx.governance™ toolkit](#) is an end-to-end toolkit for AI governance across the entire model lifecycle to enable responsible, transparent and explainable AI workflows. IBM Consulting AI ethics experts are also ready to help you determine the right standards for your business.*

## 04

**Ensure you have the right skills and stakeholders**

To have a successful customer service transformation through AI, leaders across the bank need to be involved and invested in the project. Collaborate across your business, operations and technical teams to ensure that priority AI use cases balance ROI, risk and precision. Create a business case for each use case so that executives understand the full value of what you’re doing and use it as a proof point to illustrate wins. And importantly, investing in change management and skill development as digital transformation is as much about the people and process as it is about the technology.

*IBM Consulting specializes in [end-to-end service transformation](#), spanning AI strategy, design, implementation and ongoing management of customer and field service operations.*

## 05

**Find the right partner**

Few financial services organizations have the in-house AI skills and service transformation knowledge required to be successful, so it’s key to partner with external experts to round out your team’s expertise. Assess which AI-enabled technologies and implementation partners are required to meet your customer service mission. Find out if it’s possible to build off your existing platform investments, or if a new approach is needed. There’s no one-size-fits-all approach.

*[IBM Consulting](#) works with an ecosystem of technology and financial services industry partners to ensure that we can find the right fit for your institution. Our agile approach to business design, coupled with our portfolio of AI-enabled workflow accelerators, can help you scale AI quickly.*

## 06

**Start small, test and scale**

Make sure the way you’re operationalizing AI in your financial institution has you on track to achieve business value responsibly. Apply generative AI to a specific task or workflow in a low-risk environment. Working iteratively, identify your minimum viable product, pilot it, and then refine it based on measurable KPIs. If successful, scale it across your business and move forward on MVPs for other priority use cases. Pilot, prove success, scale, repeat.

*Using our [IBM Garage™](#) methodology, IBM Consulting works with you to identify the practices, technologies and expertise your business needs to chart your customer service transformation journey from ideation to build to scale. Working iteratively, we use enterprise design thinking to co-create an MVP with you, measure its results and then work to scale it across your enterprise.*



## Ready to begin?

IBM has both the technology and the expertise to help you on your bank's AI customer service journey.

[Request an AI strategy briefing with IBM experts →](#)



### **AI assistant**

[IBM watsonx Assistant](#) is a market-leading conversational AI platform designed to help overcome the friction of traditional support and deliver exceptional experiences to prospects, customers and employees. Powered by generative AI and an intuitive user interface, IBM watsonx Assistant empowers teams to build voice agents and chatbots that deliver automated self-service support across all channels and touch points.

### **AI expertise**

[IBM Consulting](#) specializes in end-to-end customer service transformation, spanning AI strategy, design, implementation and ongoing management of customer and field service operations. We work with an open ecosystem of technology partners and have more than 1,250 active AI clients worldwide and over 40,000 AI and analytics engagements under our belt.



1. [The Connected Financial Services Report](#), Salesforce, 2023.
2. [The CEO’s guide to generative AI: Customer service](#), IBM Institute for Business Value, 1 August 2023.
3. [CEO decision-making in the age of AI](#), IBM Institute for Business Value, 27 June 2023.
4. [Customer response in seconds, not minutes](#), IBM case study on Bradesco, June 2023.
5. [Generative AI at Work](#), National Bureau of Economic Research, April 2023.
6. [Citi transforms critical internal audit with machine learning](#), NLP, and AI, IBM case study on Citi, July 2021.
7. [Taking the pain out of purchasing a home](#), IBM case study on NatWest Group, January 2021.
8. Based on results of Forrester’s Customer Experience Benchmark Survey, US Consumers, 2022 of 11,009 credit card users, reported in [The US Credit Card Customer Experience Index Rankings, 2022](#), Forrester, 11 November 2022.

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