# Gener(AI)ting the future

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# RICARDO GUERRA

CIO
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# CREATING A PLATFORM FOR SUCCESS WITH GENERATIVE AI

Ricardo joined the Itaú Unibanco Group in 1993. He is the chief information officer (CIO) at Itaú Unibanco, Latin America's biggest bank, and has been an officer of the executive committee at the Itaú Unibanco Group since 2021. As CIO since 2015, he is responsible for the technology, data, and customer experience (CX) department. He has extensive experience in digital transformation, large-scale platform management (including governance processes), technical engineering, and cybersecurity. He leads a broad technology team focused on deep technical excellence, talent training, and diversity. He is based in São Paulo, Brazil.

## THE ROLE OF GENERATIVE AI (GEN AI) IN THE FINANCIAL SECTOR

### What is your view on the role of Gen AI in financial services?

In financial services, Gen AI has transformed our approach to business. With the release of ChatGPT, even non-technical individuals began to get to grips with the technology. For the first time in our decade-long tech modernization journey, we did not need to persuade anyone to embrace modern technology.

We believe there are three fundamental areas in which we can use Gen AI. The first is enhancing existing AI models and improving traditional machine learning (ML) models, such as those for credit risk. The second is enabling hyper-personalization of CX, where we're exploring real-time client contextual relationship understanding to improve interactions. Lastly, we aim to improve efficiency and mitigate risks in internal processes. Until now, we have 250 use cases.

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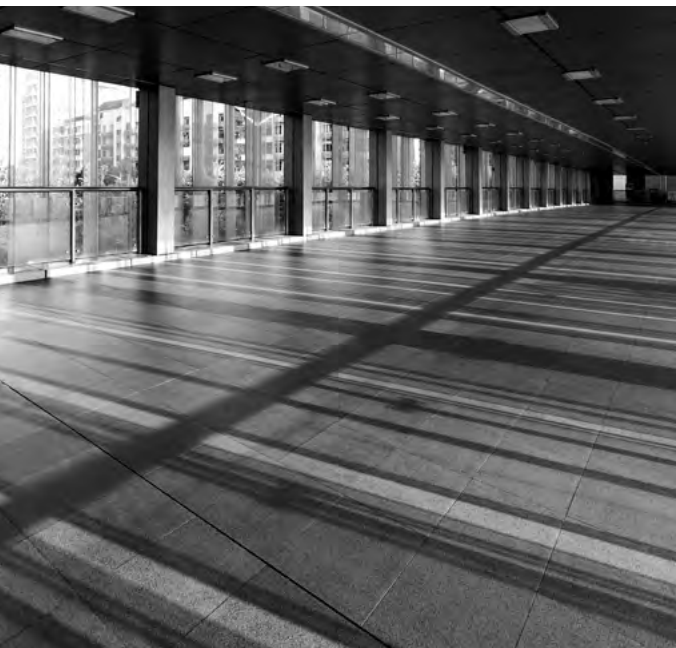
"For the first time in our decade-long tech modernization journey, we did not need to persuade anyone to embrace modern technology."

## How has the implementation and customer adoption of your AVI chatbot progressed?

AVI is a mature AI chatbot solution. We have around 20 million chats per month, representing 72% of the total inbound client interactions. We achieve 75% resolution for those chats.

Our focus is on responsible AI. Gen AI sometimes hallucinates, altering client names or balances. To address this, we are developing various methodologies using agents and other technologies. We launched RED Studio with specific test methodologies for Gen AI products to prevent unwanted changes. This studio rigorously tests and pushes Gen AI to its limits.

AVI's architecture uses best-of-grid components and reinforces reusability across all channels. We believe that using Gen AI will accelerate the solution.

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## THE CHALLENGES ORGANIZATIONS FACE IN ADOPTING GEN AI

## What are the biggest challenges in scaling Gen AI in a large country like Brazil, and how do you harness talent effectively for this purpose?

Firstly, adopting Gen AI requires a culture of innovation. With Gen AI, we must actively engage the business and design teams, as they must identify opportunities beyond mere tech adoption.

The second challenge is finding skilled AI professionals. Fortunately, our recent tech transformation has helped us attract and develop talent internally. There's a significant shortage of AI professionals in Brazil, even more so than in the US. Despite this, we are successfully attracting and developing skilled professionals who help us build our AI infrastructure and mindset.

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## What are the challenges in the adoption of Gen AI among employees?

Itaú is a tech-driven organization. Adoption was easy, owing to a tech-friendly culture and regular training. For example, Gen AI is being used for reading law documents. It reads more than 70,000 documents every month, driving productivity. However, choosing to build solutions around Gen AI involves significant opportunity costs, affecting current plans and budget pressures. The main challenge is balancing investment in Gen AI with its potential future impact.

**THE ROLE OF HUMANS IN GEN AI DEPLOYMENT**

## What role do humans play in the deployment and management of Gen AI?

CX is key, as we want to enhance personalization and better understand the customer. Technology can provide a lot of data to indicate what the customer wants.

For example, we launched a tool designed to help our investment clients understand how market movements, such as business events and news, can affect their portfolios. Through the same feature, our clients can also receive possible alternatives on how to deal with potential issues related to them, or get in touch with one of our specialists if they would rather have human assistance.

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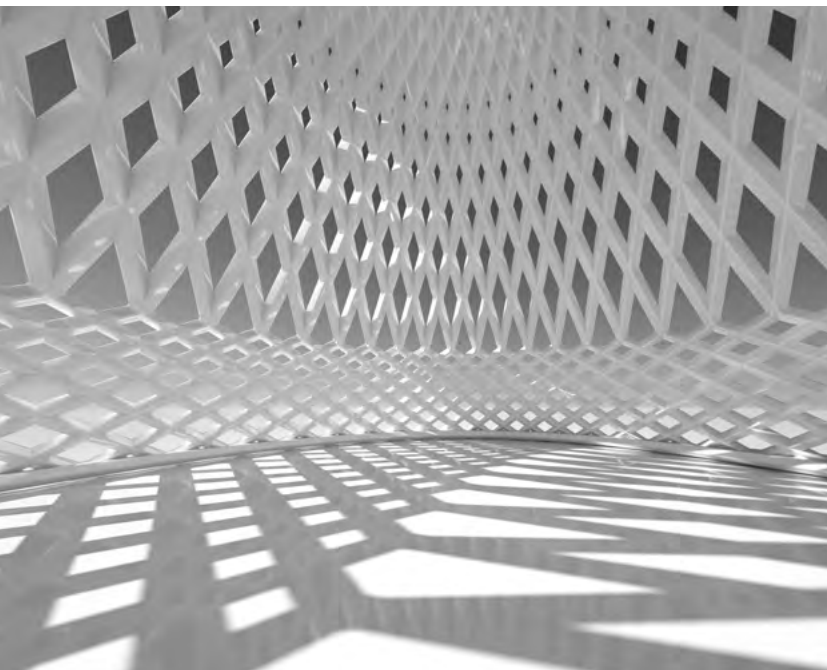
However, technology will continue to advance, and AI-managed processes can scale much more quickly.

We have established a team dedicated to emerging technological innovations, that studies all new technologies such as blockchain, crypto, quantum solutions, and the evolution of AI and Gen AI. For instance, they're learning to work with agents, a powerful solution for controlling Gen AI and advancing our projects.

## THE CHALLENGES OF SUSTAINABILITY IN ADOPTING GEN AI

### As a large organization deploying Gen AI, how do you address the challenge of sustainability?

We continually optimize our AI models to improve efficiency by reducing energy consumption, often using smaller models with reliable results. We're learning when to use different solutions and emphasize investing in sustainable data centers and green technologies. We're also closely monitoring the market, and prioritizing providers that offer green solutions. Lastly, we're trying to collaborate with other players and stakeholders for industry-wide sustainability initiatives.

We're going to have to evolve in terms of energy sources and how we build models. Many new companies, such as Mistral, for example, are building solutions with different technologies and mindsets.

## THE REGULATIONS AFFECTING GEN AI

### How do you perceive the role of regulation and government control for organizations deploying Gen AI?

Governments struggle to keep up with technological advancements. Organizations have to take on a lot of the responsibility for using and governing AI and other technologies. However, governments must still stay informed and implement supportive regulation. Many governments, including Brazil's, are forming expert committees to address this challenge.

Centralized control isn't feasible. Companies must enforce their own controls and mindsets around responsible AI. But government can offer guidance and support.
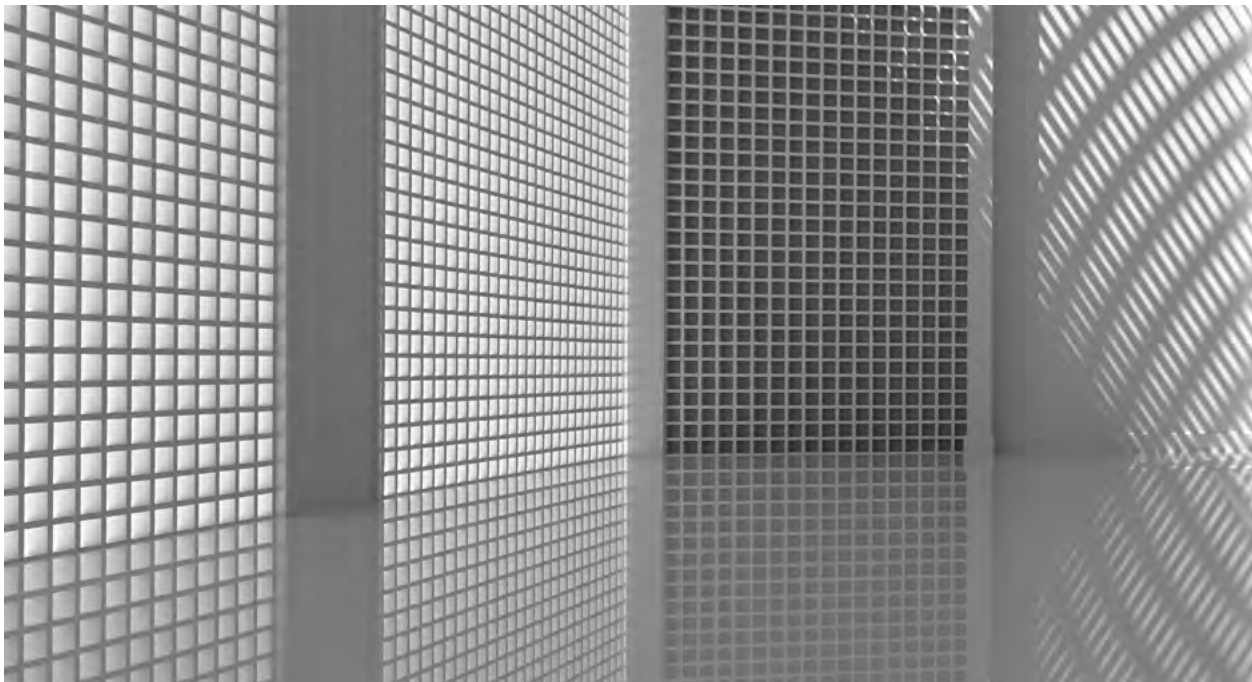
**KEY FACTORS FOR INTEGRATING GEN AI INTO ORGANIZATIONS**

### How important is robust data in the development and performance of Gen AI?

From the 1980s to the 2000s, many businesses focused on completing projects without considering the underlying platform, assuming technology would manage the data. This led to widespread data disorganization. When we started organizing our data, it became clear that modernizing our platform was essential. By redesigning our architecture with microservices, we made it easier to manage and integrate our data. Now, we have a data mesh platform running on Amazon Web Services (AWS) and have rewritten 60 percent of everything we have.

If data isn't centralized, organized, clean, and well-governed, it's difficult to use it effectively. If data from legacy systems is copied into a SaaS database incorrectly, it can lead to discrepancies due to conceptual or technological issues, resulting in the incorrect data being shown to customers.

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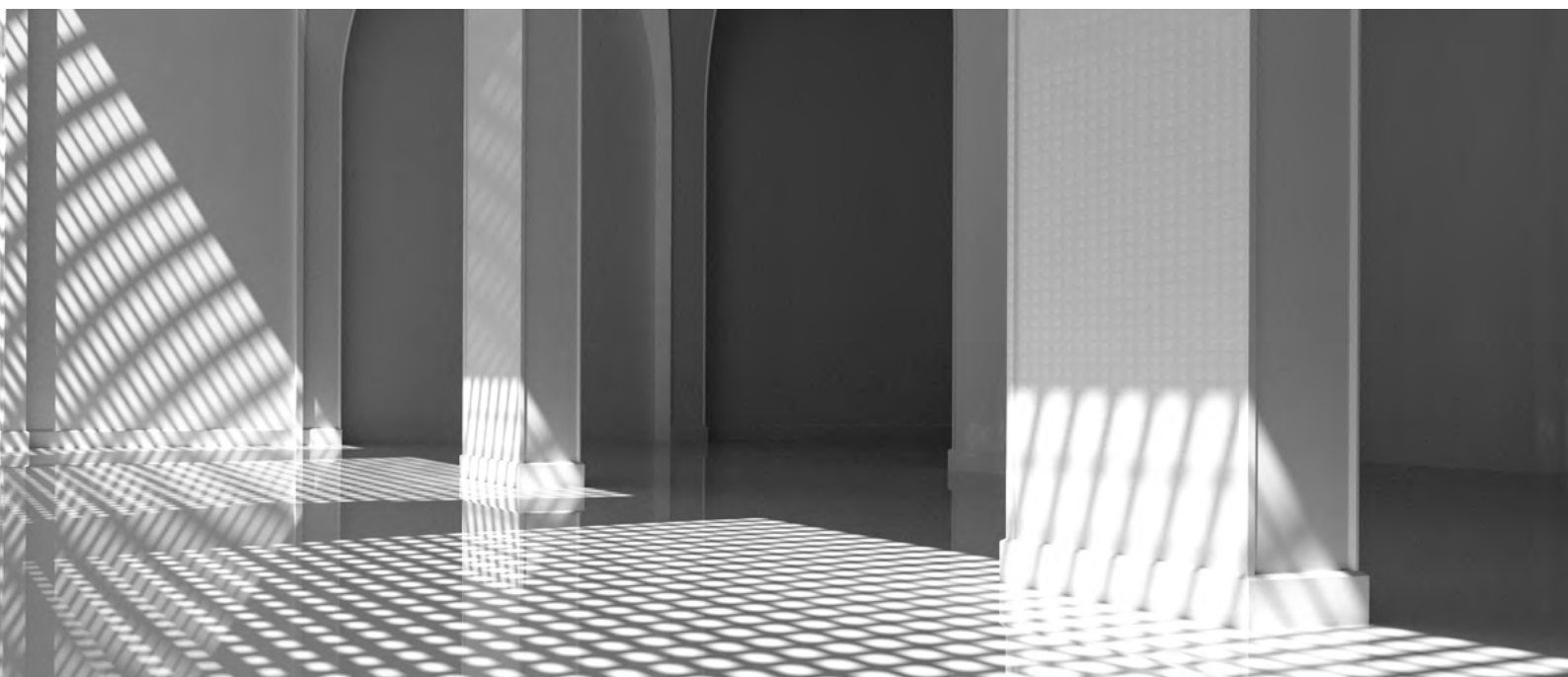
### What are the key aspects of harnessing Gen AI?

Large language model (LLM)-based chatbots are susceptible to manipulation. It's essential to have a multidisciplinary team engaged in high-priority cases. Secondly, it's about responsible AI. We have established a committee to continuously review policies on areas such as data privacy, fairness, transparency, and explicability, and we try to continuously build and strengthen ecosystem partnerships. It's very important to connect with all of the companies that are developing the technology, so we can learn from each other.

### How do you prepare a large organization to deploy Gen AI?

The first aspect is culture. If you want to use Gen AI and have success in adoption, make sure you're able to scale up. Hyper-personalization of the customer journey will be paramount. In a large company, there are numerous touchpoints to manage. Without a system to organize and understand these touchpoints, you won't be able to attain the full potential of hyper-personalization. We have more than 8,000 engineers using Gen AI, and have produced more than 1.3 million lines of code using GitHub Copilot (the third-largest amount of any organization in the world, and the largest bank, according to Microsoft).

The second aspect has to do with responsible AI. Many companies are creating solutions that can be easily manipulated, resulting in strange AI outcomes. It is crucial to understand the risks and maintain control over your developments.

Thirdly, it's about keeping up with market evolution and innovations. It's essential to have the right professionals and processes. Building the right connections and network is also crucial. It's easy to get lost and fail to adopt the right technologies. Ensure you have a network of connections that keeps you in touch with the cutting edge of the sector, and with the competition.

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