



Persistent

# Digital Engineering for the **Era of Generative AI**





# A Changed World: Generative AI for Business

Software consumed the world. Now AI is doing the same. How did we get here?

After all, AI is nothing new. For years, enterprises have experimented with AI and applied it in multiple ways. It powers chatbots for managing simple customer service queries. Many companies have applied AI with automation to take on rote and repetitive tasks such as interactive FAQs or accelerate the pace and accuracy of tasks such as invoice processing and managing insurance claims.

What's different now is the ability to literally put AI into the hands of non-technical businesspeople and consumers through the use of Generative AI. This type of AI has the remarkable ability to leverage Foundation Models (also known as Base Models) and produce code, text, images and other media that are virtually indistinguishable from those created by humans. AI is now easier to use, and this democratization of AI will change the way we think about and use AI forever.

Generative AI models such as ChatGPT have made AI a commonplace tool, with seemingly everyone racing to find new uses for it.

We expect the impact will be felt from every end of the digital spectrum — from those developing software code and digital agents to consumers using applications and services in new and more accessible ways. AI removes technology friction at a scale and scope that we have never seen previously.

However, Generative AI's ability to remove that technology friction creates another kind of tension

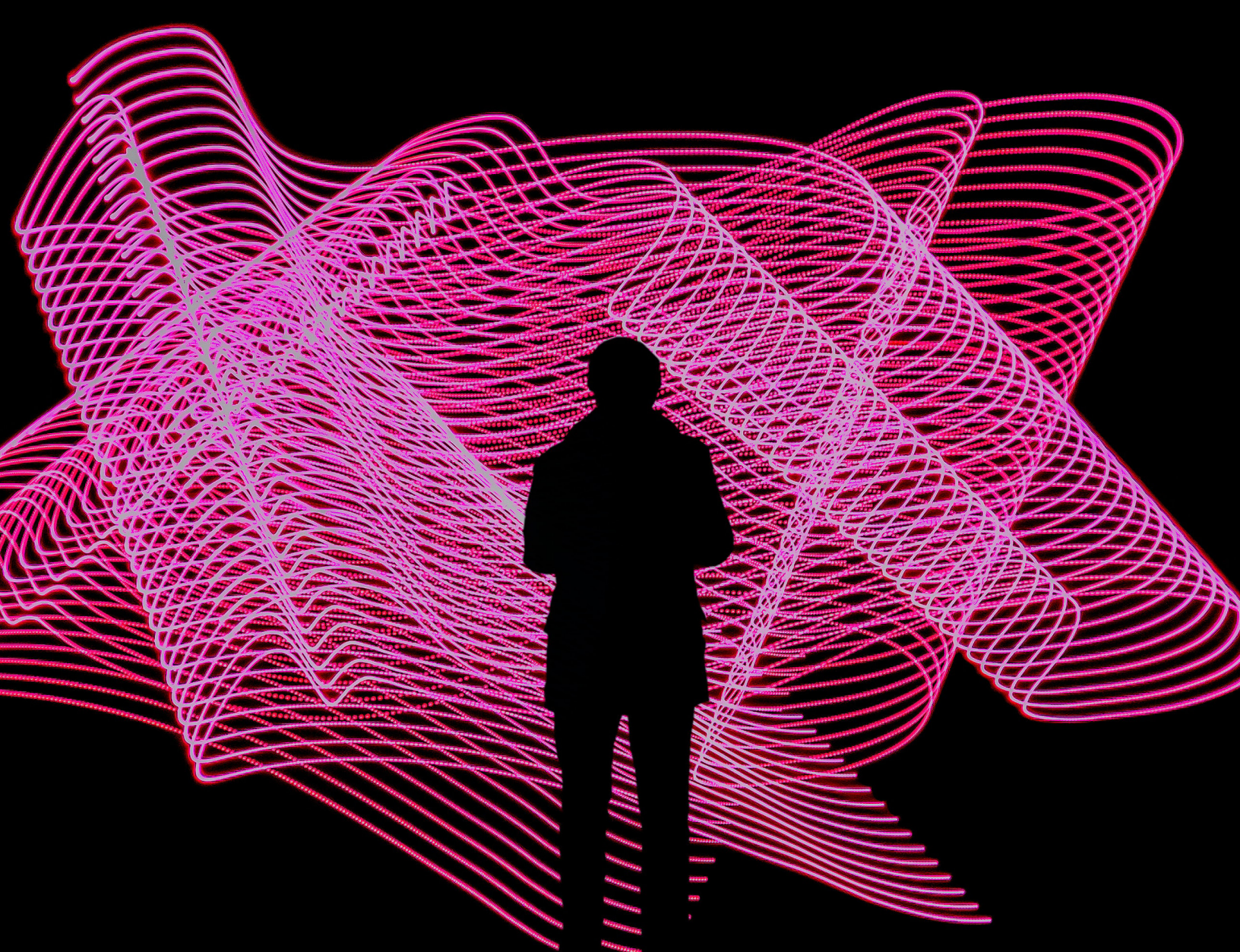
for enterprises, who need to carefully consider how to leverage it in use cases that will have real impact on IT operations and business functions.

As Foundation Models are trained, there are open questions on the source, lineage, accuracy, quality, bias and consent around the training data. Many companies eagerly want to tap Generative AI's potential but are unsure about first steps, unclear about how to benefit from it, and understandably concerned about how to ensure data privacy and security.

**At Persistent, we started dedicating resources and investments toward developing Generative AI solutions last year.**

**As a \$1 billion leader in Digital Engineering with expertise in Software Engineering and Digital Transformation, our deep heritage is rooted in data and analytics as well as software development for hyperscalers, all of which are core components of Generative AI. This means we are uniquely positioned to understand the market and the technology to develop Generative AI solutions and offerings to power businesses.**





## Every business will be touched by Generative AI

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### Enhanced outcomes, experiences and engagement

Generative AI will enable better conversational interfaces, either through chatbots or digital agents, for customer service, employee engagement and other applications. The outcome will be improved customer and employer experiences, increased customer satisfaction, and more fulfilled employees.

A generation of Generative-AI inspired ideas and concepts will lead to more innovative and effective designs across a variety of functions, processes and industries.

Generative AI will scale rapidly with the creation of synthetic data, such as images, videos and text. This has multiple uses, such as enhancing personal and professional creativity, training machine learning models and creating marketing materials and other content.

Functional solutions will enable easier access to insights. For example, Generative AI tools will rapidly analyze financial documents. Other tools will extract and package the right information from multiple sources across a business.



Product Engineering will enter a new age of productivity, efficiency and reliability.

- Co-pilot programs, where Generative AI-based tools and digital assistants work alongside software product engineering teams, will help developers write code faster and more efficiently, allowing them to re-direct their time and talents to other activities and high-value projects.
  - Generative AI can be trained to translate code from one language to another, migrate code from one platform to another and generate code documentation, greatly accelerating code development end-to-end.
  - Low-code / no-code enterprise digital assistant frameworks will be created via Generative AI.
- These frameworks can be used to create chatbots, virtual assistants and other AI-powered applications without the need for specialized coding skills, resulting in accelerated deployment and time-to-value.
- Generative AI can improve knowledge-based search by generating summaries of knowledge-based entries, creating links between related entries and suggesting relevant ones.
  - This technology will also automate test case generation and coverage analysis and improve the quality and reliability of software by ensuring that all code paths are tested.

Product and App Modernization will accelerate.

Generative AI will make it easier to execute intelligent document processing tasks, such as extracting data from documents, and classifying and summarizing documents. This will accelerate what are normally time-consuming and potentially manual processes.

The technology will expedite app migration tasks, such as converting code from one language to another, migrating data from one platform to another and generating documentation for migrated apps. This will improve efficiency and decrease the dependency on multi-skilled engineers.

As part of our continued 360-degree partnership with Microsoft, Persistent is expanding its existing Azure Center of Excellence with Generative AI-based Modern Workplace solutions that promise to create a unified employee experience while improving the overall workplace.

The move follows the successful implementation of Viva within Persistent along with a Generative AI-powered chatbot on Microsoft Teams, which has been helping digitize employee onboarding, training, and ongoing engagement, leading to increased productivity and lower attrition rates.





# Generative AI at Persistent

We have always been at the forefront of digital innovation and have systematically bolstered our capabilities in software product development, application modernization, cloud enablement, enterprise security, intelligent automation, and data and AI.

There are many ways for enterprises to take advantage of Generative AI for real business benefits, but they must work with an experienced and trusted partner that can determine the best use cases while managing risk and avoiding unnecessary delays. We are in market today with offerings and solutions that can bring the power of Generative AI to your business.





## Software and Quality Engineering

Persistent WingMate is our first AI-powered software suite for application development and modernization that supercharges software design, development, testing and deployment for faster time-to-market and greater efficiency. WingMate accelerates software development time, while significantly cutting costs and improving productivity.



## Enterprise Digital Assistants

Our digital agents take on rote and time-consuming tasks, allowing staff to focus on higher-value activities and improving overall productivity. Persistent's PiBot provides a framework to build digital assistants powered by Foundation Models that provide quick and accurate information for better decision-making and outcomes in areas such as HR.



## Vertical Solutions

We collaborate with clients and partners for specialized uses cases to improve user experiences and unleash new levels of speed and agility, such as clinical data analyses in healthcare, conversational banking, tax data pattern analysis, personalized recommendations and more.



## Workplace Productivity

We use Generative AI solutions to enable easy information access and make company processes faster, smarter and simpler, such as accelerating onboarding or eliminating manual integration processes and data entry, resulting in massive cost savings.



# Why is Persistent the Digital Engineering Partner of Choice?

At Persistent, our three decades of growth has been driven by our ability to provide market-leading Digital Engineering solutions to many of the world's premier companies. As software companies and enterprises look to adopt Generative AI models, they need a provider with a proven track record of success that can guide them through the process — from identifying, building and testing use cases, to deployment and continuous improvement.

**60**

Global Fortune  
500 Companies

**14 of 30**

Most Innovative US Companies  
As rated by Boston Consulting Group

## Banking

**8 of 10**

Largest Banks in  
both US & India

**25+**

Global  
FinTechs



## Healthcare & Life Science



**3 of 5**

Top CROs & Analytical  
Instrument Companies

**5 of 10**

Top Pharmaceutical  
Companies

**4 of 10**

Top US Health  
Systems & Payors

**6 of 10**

Top Medical Device  
Companies





## AI Requires Data, and We're Data Experts

Our company's beginnings are rooted in data systems. With decades of experience, we are the ideal partner for companies looking to utilize Generative AI through connections to a variety of enterprise data sets for scalable solutions that adhere to all security, privacy and governance requirements.



## Digital Engineering Leadership

Software is core to our business and Generative AI allows us to extend our unmatched software engineering leadership into new Generative AI engagements. We work with clients across industries to use the technology to turbocharge software development, employee and customer services, and workplace processes.



## IP, Accelerators and Investments

We're ambitious about the efficiencies, outcomes and value that Generative AI can generate for clients. It's reflected in our ongoing IP investments, our extensive staff training on partner platforms, and our suite of Generative AI accelerators to improve workforce productivity, streamline app modernization and accelerate software engineering.



## Deep Domain Knowledge

We work with premier brands across financial services, life sciences and software. Working with our clients, we apply our industry expertise to develop Generative AI use cases to harness new data insights, create industry buyer personas, test new models, and provide employee and customer-facing digital agents.

# Partnerships

We collaborate closely with global AI leaders and promising start-ups to develop and deliver Generative AI solutions to the market. Our software engineering and product development experience gives us a distinct advantage versus competitors in co-developing new offerings with our partners.



With a recently launched practice for Microsoft Viva integrated with Generative AI, Persistent is expanding its existing Azure Center of Excellence, with 4,500+ certifications among our staff, for Generative AI-based modern workplace solutions. Together, we're creating unified employee experiences that bring new benefits to enterprises.



Persistent is working with AWS leveraging our 2,500 AWS practitioners to bring Generative AI capabilities into solutions such as Amazon Neptune for enhanced recommendation engines, fraud detection, and security, and Amazon Kendra for Intelligent Search.



We have early access and first-mover advantage with Google as it works to integrate Vertex AI and other Generative AI tools into new offerings for software development, search and other areas, backed by our staff that has attained more than 1,300+ certifications in Google Cloud to provide a critical underpinning for Generative AI solutions.



With a staff that has attained more than 5,000 Salesforce certifications, we're building unique Generative AI-powered solutions on top of Einstein GPT for vital vertical industry functions, such as fraud detection and automated loan underwriting in financial services, and risk prediction and personalized triage in healthcare.



As one of IBM's leading development partners with 2,300+ engineers, we're building on our 20-year partnership to embed IBM's foundational AI offerings, conversational models and its other AI capabilities into solutions for customers across industries. We work together to ensure that enterprises maximize the value of their AI investments.



# Case studies: Delivering Generative AI Value

## Enterprise Digital Assistant for Case Deflection and Support

An IT Services and Product Development company wanted to better manage the demand and variability of internal queries and resolution for IT, HR and Finance. Persistent developed a digital assistant that delivered significant benefits.



### 80%

Faster turn-around time in resolving complex support cases.

### 75%

Improvement in quality of responses.

### 50%

Savings in total FTE Cost responding to support queries.

# Migrate and Modernize an Enterprise Test Suite to Meet Company Standards

A multinational networking company wanted to migrate existing product test cases from the Ruby programming language to a Python based standardized testing framework. Persistent's Generative AI based solution assisted trained test automation professionals to optimize the test cases while migrating to the new framework. Developers had specialized screens preloaded with ruby and migrated python code to support the migration.



**40%**

Savings in migration expenses

**1.5X**

Faster migration

**Lower dependency**

on Ruby and Python skills



# Getting Started

As the Generative AI trend continues apace, many companies will struggle with determining the proper starting point. Many possess data, process and business expertise, but need help determining a plan to apply those skills in the appropriate ways to create Generative AI value.

Every company is different in its approach to these types of strategic projects, its IT infrastructure and its security procedures. Nonetheless, any GenAI deployment needs to take into consideration several factors:

## Outcomes

Companies should first assess and agree the business or IT challenges that would benefit from the generative capabilities of Foundation Models using corporate data. Strong benchmarks and metrics (e.g., speed, efficiency, customer satisfaction) are required for current operations, processes and services. These can be used to set reasonable and achievable expectations and goals with a GenAI deployment.

## Data

GenAI is intrinsically dependent on data, and in most organizations, data lives in different places, in various formats, and in assorted states of quality. Depending on the use case, a company needs to identify what data dependencies are required to utilize GenAI and be mindful of how that information is presented to users for maximum explainability and transparency.

## Cloud

Like data, companies need a scalable cloud infrastructure to power Foundation Models. A GenAI deployment is an ideal time for a company to consider modernizing and remediating existing cloud models — whether private, public or hybrid — to ensure that it possesses the scale needed at an affordable price point.

## Security

GenAI can expose an organization to new unforeseen levels of risk if not properly deployed. Companies must assess their current security readiness and resiliency, and add proper data safeguards and guardrails to ensure the highest levels of security, privacy, and proper governance.

**Persistent engages with customers to plot a GenAI plan around these and other functional areas, allowing us to ensure that the potential benefits of a GenAI deployment quickly come to fruition.**

**Our Generative AI Workshop can help you get started. We start with an initial discussion to understand your business needs and data availability. Within 60 days we will implement a Generative AI data pipeline followed by fine-tuning. From there we agree with you on the next steps: engage with Persistent for implementation, continue the work in-house or decommission the use case, data and outcomes.**

**[Click here](#) to learn more about starting your Generative AI project.**





**Persistent**

See Beyond, Rise Above

[www.persistent.com/generative-ai](http://www.persistent.com/generative-ai)