

HFS Horizons Report

Generative Enterprise™ Services, 2023

October 2023

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Excerpt for Cognizant



People are excited by the potential impact of GenAl on their lives—both their work and their personal experiences. They want to know how they can be better than they are and how to make others around them better. They want to know how to keep enriching their experiences because of the promise of GenAl.



Phil Fersht CEO and Chief Analyst, HFS Research

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Introduction, the HFS value chain, and market dynamics

Introduction

- This HFS Horizons: Generative Enterprise™ Services, 2023 report is the industry's
 first competitive analysis of professional services firms and the value they create with
 enterprise clients adopting and experimenting with generative AI (GenAI)
 technologies.
- HFS' Generative Enterprise™ articulates the pursuit of AI technologies based on large language models (LLMs) like ChatGPT and GPT-4 to reap huge business benefits for organizations in terms of continuously generating new ideas, redefining how work gets done, and disrupting business models steeped in decades of antiquated process and technology.
- The report examines and assesses 35 service providers. Our research evaluates the providers' capabilities to understand the *Why, What, How, and So What* of their Generative Enterprise services offerings.
- This report also includes detailed profiles of each service provider, outlining their provider facts, strengths, and development opportunities.
- We based this Horizons research on briefings from each of the participants along with publicly available announcements, datapoints, and case studies. We began with an open call for participation, resulting in unprecedented participation levels. We requested each participant to provide customer and partner references, and we have used their responses and supplementary customer reference data to ensure the voice of the customer impacts the outcomes. Where a service provider chose not to brief us, we created profiles and scores from publicly available announcements, case studies, data, and our regular conversations with leaders across functions and industries.

Executive summary

1	The generative Al gold rush is on in pursuit of a \$7 trillion prize	We've never seen a technology adopted so quickly. Generative Al's (GenAl) poster child, ChatGPT, reached 100 million users in two months. RPA took more than a decade to reach 15 million. Every boardroom is asking every CEO, "What are you doing with GenAl?" This bottom-up and top-down demand and the promise of a \$7 trillion prize has prompted a gold rush among service providers as they hurry to organize and claim a piece of the action. In a matter of months, leading systems integrators and consultancies have conjured up new practices, divisions, platforms, and partnerships. They are scaling up, investing billions, training thousands of people, and recruiting thousands more—and this journey is only just beginning.
2	Point solutions dominate, but this is not where we will end up	Already, we are witnessing a rapid diversion of Al budgets to GenAl projects. On average, this stands at 41% across the enterprises surveyed for this report, but we expect that to grow as enterprises move beyond their initial point solutions in POCs and pilots. Most are solving specific tasks. And as the next cycle of budget-making begins, we expect budgets to scale up to take GenAl deeper into end-to-end processes, shaping new ways of working. The next step will be harder but more rewarding, and if it doesn't happen, there are going to be a lot of red faces among service provider leaders, many of whom have gone all-in on GenAl.
3	The disruption is coming first and fastest to CX, EX, and sales and marketing	As part of our research for this report, we asked enterprise leaders the functions they are prioritizing for the application of GenAl. Customer experience (CX), employee experience (EX), and sales and marketing lead the way. This chimes with the case studies shared by service providers. Transforming code has been touted as a leading use case by many service providers, and it features prominently in their own internal use and in services they offer. But, in our own research, it has only appeared in around 10% of the cases studies we've seen. A key thing to note regarding case studies to date is that many are proofs of concept and pilots, and few are coming with an ROI. At this stage in development, most enterprises are happy to see softer measures such as time-to-serve, CSAT, or time-to-market.
4	Knowing the tech is one thing; helping to transform with it is quite another	Customers see a gap between how well their service providers deliver on tech implementation compared with their ability to transform business. It's an important gap as enterprises seek help on their journey to the Generative Enterprise beyond the initial point solutions. Knowing the tech is one thing; helping transform ways of working because of the tech is another altogether. We think this gap will close as many service providers are going all-in on GenAI, focusing on proving the effectiveness of applying GenAI to their own ways of working first. The lessons they learn through self-transformation will give them the credentials to help enterprises shape their journeys.
5	This revolution is personal, and you need to get down and dirty with it	Using GenAl tools is where your personal experience and understanding begin. This is your due diligence. The journey to the HFS Research Generative Enterprise is not easy, but it starts with your understanding. Leaders need to develop their GenAl muscle memory to begin seeing the future through today's technology rather than persisting with a view constructed on their experience and knowledge of the technology of

the past.

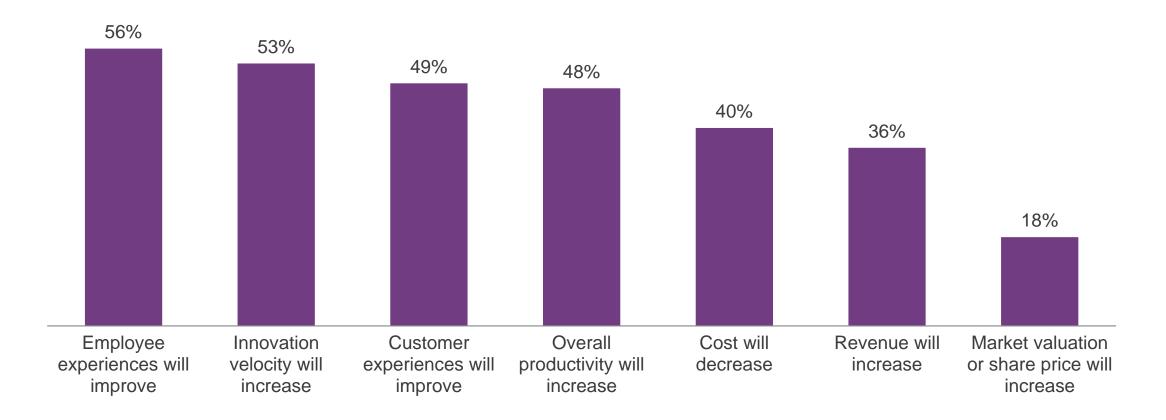
The new S-curve

An inflection point for the IT and business services industry

- The Generative Enterprise inspires a new S-curve of value creation for the IT and business services industry. Traditional outsourced service areas are likely to lose momentum in favor of AI-led, data-driven services focused on driving growth and sustaining trust. Successful relationships cannot be effort-driven; they must be performance- and purpose-driven. Hybrid pricing with baked-in innovation funds will be critical to prove value. (see page 9)
- The GenAl gold rush is on: Leading IT and business services firms made 50+ GenAlrelated announcements in just two months early in 2023. The primary focus of these was on expanding hyperscaler partnerships. (see page 10)
- The Generative Enterprise and its widespread application of GenAl and other forms of Al can successfully manage the <u>Digital Dichotomy</u>, balancing the macroeconomic Slowdown with the Big Hurry to innovate. (see page 15)
- Data and AI are like the stars of two galaxies colliding—the impact will destroy and create at an alarming rate. Without quality data, the benefits of AI will not scale, and to scale to the ecosystem, the data accessed will need to be increasingly private in nature. (see page 16)
- Stages of GenAl value creation for enterprises will be based on the nature of their data and the maturity of their technology. The impact of GenAl goes beyond productivity. (see pages 17-18)
- Roles GenAl will impact go beyond rote tasks, disrupting creativity and ideation.
- The road ahead is not easy. Page 20 lists 10 challenges every enterprise must consider.

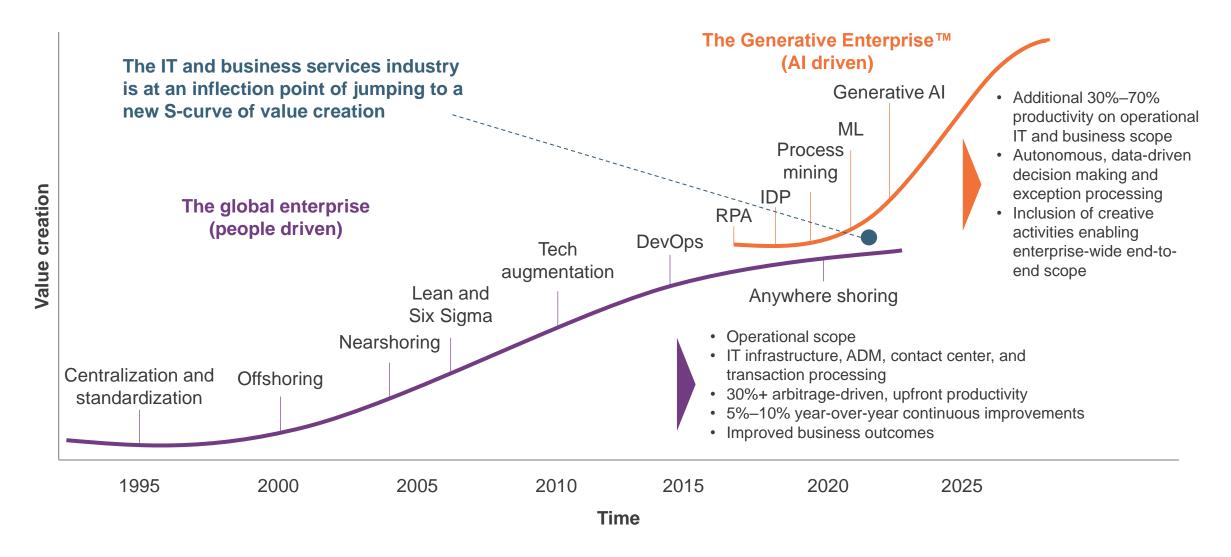
Enterprises expect EX, CX, innovation, and productivity wins

Q: How do you expect GenAl to impact company business economics over the next 12-18 months?



Sample: October 2023, 104 enterprises actively exploring and deploying GenAl across the Global 2000

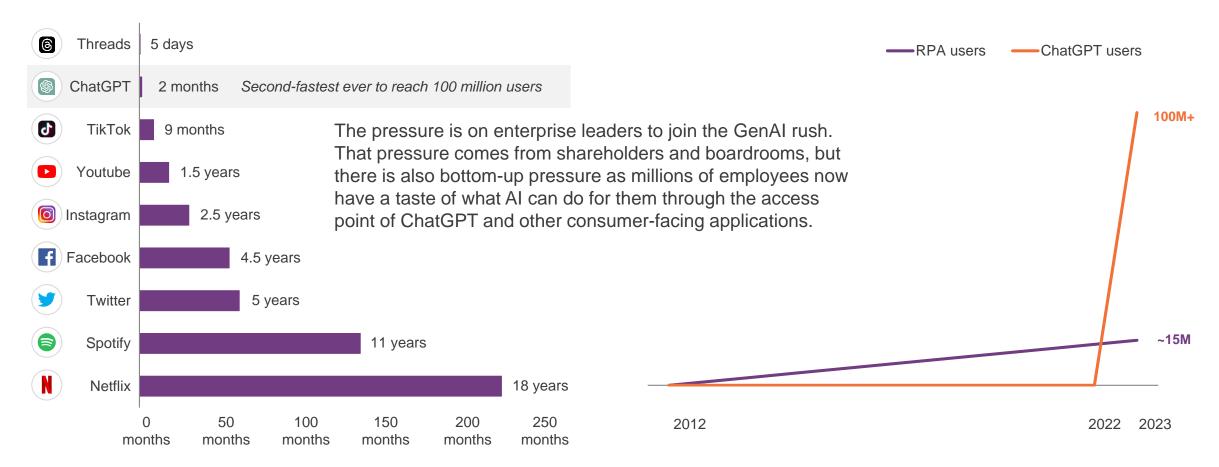
The Generative Enterprise inspires a new S-curve of value creation



End consumers' ultra-rapid adoption of GenAl technologies drives business-to-business adoption

Road to 100 million users for various platforms

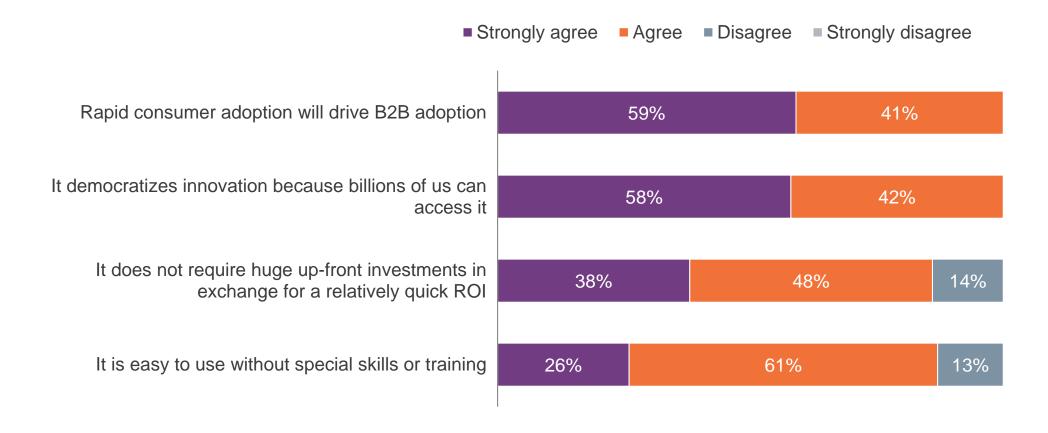
Number of users over time (RPA versus ChatGPT)



Source: Publicly available information, HFS estimates

Rapid consumer adoption makes GenAI a different disruption

Q: GenAl is drastically different from other recent technological disruptions (e.g., RPA, blockchain, metaverse, NFTs) because...



Sample: October 2023, 104 enterprises actively exploring and deploying GenAl across the Global 2000

Enterprise-grade and governed GenAl can transform the services that IT and business services can provide in this healthcare example

Health insurance value chain

Underwriting and product

- Optimized benefits design
- Dynamic, real-world, data-driven actuaries

Sales and marketing and member management

Provide data and network management

 Personalized provider management Care and medical management

- Chronic disease management
- Care based on acuity and resource availability
- Targeted service for under-served communities

Claims and member services

- Multi-modal services for members and providers
- Provider appeals management

Compliance and billing

Near term

Longer term

 Intuitive compliance planning and adherence

Healthcare provider value chain

Referrals and consultations

 Enhanced diagnosis accuracy Pre-authorizations and admissions

Ambulatory and acute care

- Customized medical report
- Personalized treatment plans
- Enhanced surgical planning and practice

Post-acute care and rehabilitation

- Personalized postacute-care support
- Care based on acuity and resource availability

Patient services and claims management

- Multi-modal services for patients
- Utilization reviews and appeals interactions with health plans

Compliance and network management

 Intuitive compliance planning and adherence

Leaders expect customer ops to create very high value in next 18 months

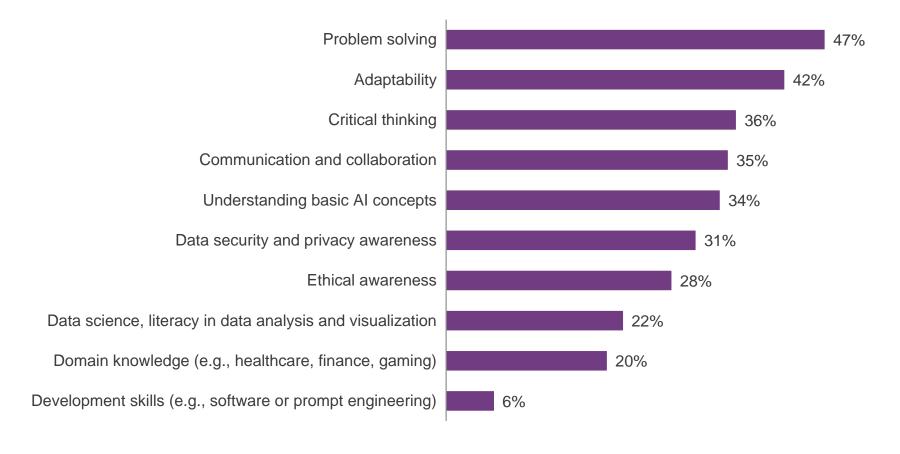
Q: Select the top three business functions where GenAl will create very high value over the next 12-18 months.



Sample: October 2023, 104 enterprises actively exploring and deploying GenAl across the Global 2000

Top three essential—yet lacking—skills for success in GenAl

Q: Select the top three skills workers need to succeed, but lack, when using GenAl in the next 12-18 months.



Sample: October 2023, 104 enterprises actively exploring and deploying GenAl across the Global 2000

The Generative Enterprise can successfully manage the Digital Dichotomy, balancing the macroeconomic Slowdown with the Big Hurry to innovate

Cost savings are important but no longer sufficient to keep most leaders in their jobs.

Minimizing costs to a desired level is one ceiling of achievement, but ambitious enterprise C-suites must keep striving for new sources of value to stay competitive.

Investment in Generative Enterprise opportunities offers the chance to bridge the gap.

The Slowdown

- Enterprises face
 multiple
 macroeconomic
 headwinds and
 challenges assaulting
 their strategic goals.
- IT and operational budgets are tightening.
- The talent crunch will not improve unless we find a hidden continent under the ocean!

The Big Hurry

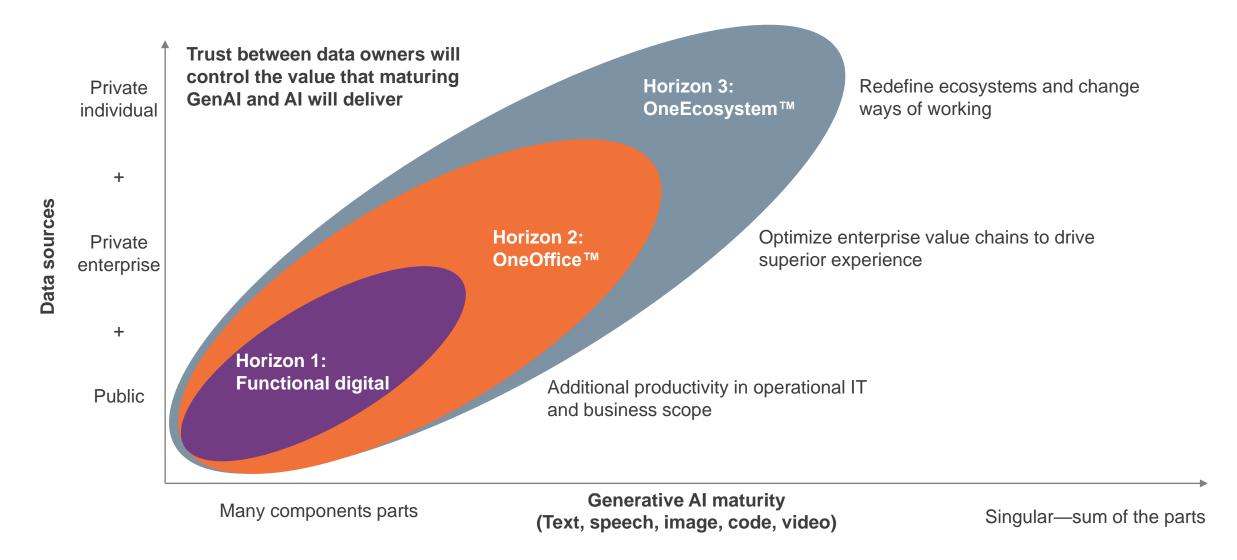
- Functional digital is
 Horizon 1. It is essential for survival.
- Enterprises realize the dire need to achieve their OneOffice™.
- Horizon 3, driven by OneEcosystem™, unfolds right before our eyes.
- The case for building a
 Generative Enterprise™
 is stronger than ever.

Both things are true

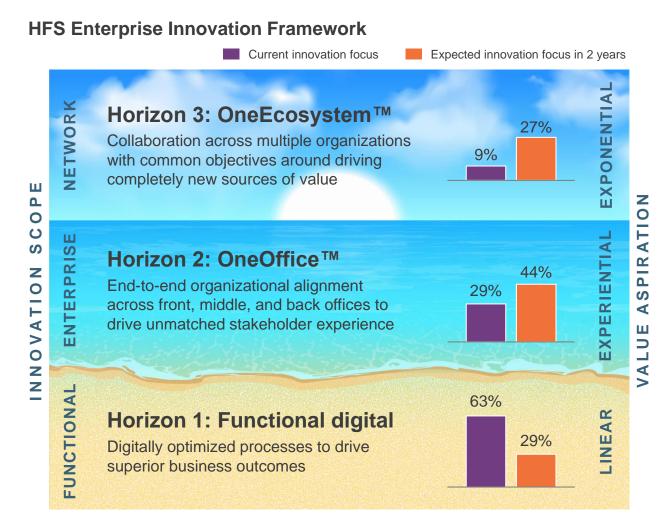
Savings Investments

Generative Enterprise™

Access to increasingly private data sets holds the key to redefining ecosystems, ways of working, and the value delivered



GenAl could impact more than just productivity



Sample: 602 executives across Global 2000 enterprises

Source: HFS Research, 2022

Impact of GenAl across the three Horizons of enterprise innovation

Horizon 3: OneEcosystem

Redefine ecosystems and change ways of working

- Exploit generative AI for competitive advantages and to potentially open new revenue streams
- GenAl is embedded into daily lives of consumers to influence and drive the way we live, work, and interact

Horizon 2: OneOffice

Optimize enterprise value chains to drive superior experience

- Integration of generative AI with traditional analytical AI and its application across the value chain
- · Autonomous data-driven decision making and exception processing
- Inclusion of creative activities enabling enterprise-wide end-to-end scope

Horizon 1: Functional digital

Additional 30%-70% productivity in operational IT and business scope

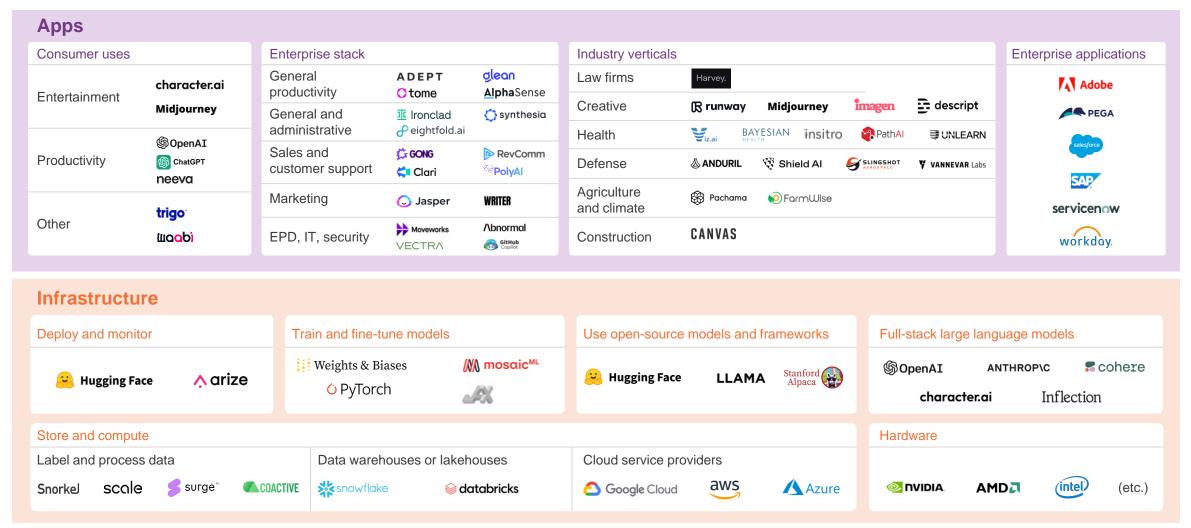
- Helpdesk operations (IT, employee, vendor, customer)
- Software development life cycle (coding, testing)
- · Cybersecurity (threat hunting)

New offerings to build, deploy, and manage large language models

The role of data, OneOffice, and OneEcosystem in how GenAl will impact the enterprise beyond productivity

	Horizon 1: Functional digital		Horizon 2: OneOffice™	Horizon 3: OneEcosystem™	
	Stage 1: Dots Point solutions	Stage 2: Lines Process solutions	Stage 3: Circles Enterprise solutions	Stage 4: Venns Industry solutions	
Nature of data	Publicly ava	ailable data	Publicly available + Private enterprise data	Publicly available + Private (enterprise + individual) data	
Underlying technology	Modular generative AI (e.g., individual use cases across text, speech, image, code, video)	Singular generative AI (e.g., integrated use cases across text, speech, image, code, video)	GenAl integrated with (e.g., blockchain, quar	<u> </u>	
Stake- holders	IT	IT + business	IT + business	+ strategy	
Type of impact	 Productivity from point solutions Helpdesk operations (IT, employee, vendor, customer) Software development life cycle (coding, testing) 	Productivity from creative activities (e.g., writing, arts, visuals)	 Optimize enterprise value chains to drive superior experience Autonomous data-driven decision-making and exception processing Exploit GenAl for competitive advantages and potentially to open new revenue streams 	 Redefine ecosystems and change ways of working GenAl is embedded into daily lives of consumers to influence and drive the way we live, work, and interact 	

An entire ecosystem around GenAl is unfolding right before our eyes



Source: HFS Research, Sequoia, 2023

The enterprise journey may be uncomfortable—10 reasons why

"

While the promise of GenAl for enterprises is immense, it is too early to celebrate. I think this is not a slam dunk, and it will be an uncomfortable journey. Doing nothing is not the answer, but we need to embrace it with our eyes wide open!



Saurabh Gupta
President, Research and advisory

- Most GenAl examples are not enterprise-centric, and only a handful of projects have reached production.
- There is an arms race to build our foundational models with the crazy influx of capital. If the bubble bursts, the technology will be blamed.
- 3. More power is getting concentrated with hyperscalers. Enterprises are already frustrated with the oligopoly.
- 4. A brand-new ecosystem including Nvidia, Databricks, and startups is emerging. Enterprises don't know how to navigate this.
- 5. Governance and integration will be key. Most data privacy laws are trying to block a black-box approach. Major legislation is looming, including the US AI Bill of Rights and the EU AI liability directive. Litigation is kicking in.
- The FTC has opened an investigation into ChatGPT-maker OpenAl over potential harm it could cause and the company's security practices.
- 7. Most GenAl use cases use public data. Getting enterprises to share private data will be challenging.
- 8. The singular focus on productivity is misleading.
- Technology is continuing to evolve very rapidly, but enterprises are still struggling to adopt cloud!
- 10. The debate around Al's carbon footprint is just getting started.



Research methodology

Service providers covered in this report















Cigniti























































Note: All service providers are listed alphabetically



Generative Enterprise services value chain (scope of services)

Training and education	Innovation	Consulting	Engineering	Technology management	Organizational change
 C-suite education Employee education Employee training Workshops Hackathons Introduction to technology and interfaces Prompt training Centers of excellence Labs 	 Use case generation Build pilots, proofs of concept Build production environments Rapid iterative design Build and test large language models Identify ecosystem partners Drive co-creation with ecosystem partners 	 Policies and procedures Privacy and security Use case validation Process redesign Technology choices Vendor relationship management Technology selection and validation Governance Compliance 	 Data strategy Data engineering Data analytics Large language model build Prompt engineering Retrieval augmented generation (RAG) Fine-tuning 	 Ongoing technology innovations Platform implementation Platform management Ecosystem management 	 Change management Function redesign Help enterprises understand the data, processes, and interactions to drive functional optimization Help enterprises break down the silos of data across the enterprise, continuously find patterns, and maintain robust governance across all decision points Enable the OneOffice to significantly improve decision making and stakeholder experience Ability to completely redefine how work is done (e.g., 30%-70% additional productivity, autonomous data-driven decision making, and the inclusion of creative activities, enabling enterprise-wide end-to-end scope)

The emerging Generative Enterprise technology ecosystem consists of many suppliers unknown to the enterprise a year ago

Apps Models Infrastructure

End-to-end apps

End-user-facing applications with proprietary models

Examples: ChatGPT, Google Workspace, DALL·E, Midjourney, Runway

Apps (text, code generation, speech, image, video, 3D models, audio, and music)

End-user-facing B2B and B2C applications without proprietary models

Examples: Jasper.ai, GitHub Copilot, Replit, Pictory.ai,

Closed-source foundation models

Large-scale, pre-trained models exposed via APIs

Examples: GPT-3 and GPT-4 (OpenAI), PaLM and LaMDa (Google), LLaMA and Galactica (Meta), Chinchilla AI (DeepMind), Megatron-Turing NLG (Nvidia)

Model hubs

Platforms to share and host models

Examples: Hugging Face, Replicate

Open-source foundation models

Models released as trained weights

Examples: Stable Diffusion (Stability)

Cloud and data platforms: Examples: AWS, GCP, Azure, Databricks, Coreweave

Compute hardware: Accelerator chips optimized for model training and inference workloads. Examples: GPUs (Nvidia), TPUs (Google)

Source: Andreessen Horowitz (known as "a16z") and HFS Research

Sources of data

This report relied on a myriad of data sources to support our methodology and help us obtain a well-rounded perspective on Generative Enterprise service providers in our study. Sources are as follows:



RFIs and briefings

Each participating vendor completed a detailed RFI.

HFS conducted **briefings** with executives from most vendors.



Reference checks

We conducted reference checks with 30+ active clients of the study participants and 40+ active partners via phone-based interviews and detailed surveys.



HFS vendor ratings

Each year, HFS fields multiple demand-side surveys in which we include detailed vendor rating questions.



Other data sources

Public information such as press releases, websites, etc.

Ongoing interactions, briefings, virtual events, etc., with in-scope vendors and their clients and partners.

Assessment methodology

The *HFS Horizons: Generative Enterprise Services, 2023* report evaluates the capabilities of providers to understand the *Why, What, How, and So What* of their Generative Enterprise services offering. Our assessment is based on inputs from clients and partners and augmented with analyst perspectives.

		←	Distinguishing supplier characteristics		
Assessment dimension	Assessment sub-dimensions (Briefing questions)	Horizon 1 service providers	Horizon 2 service providers	Horizon 3 service providers	
Value proposition:	How does your firm define the value of AI for your clients?		 Horizon 1+ Ability to help enterprises break down data silos across the enterprise, continuously find patterns, and maintain robust governance across all decision points Enabling the OneOffice to significantly improve decision making, driving unmatched stakeholder experience 	autonomous data-driven decision making, inclusion of creative activities enabling enterprise-wide end-to-end scope)	
The Why? (25%)	What is your firm's point of view on GenAl in terms of value creation potential? What will be the impact of GenAl for 1) clients and 2) your own firm?				
	Why should enterprises choose you for their Generative Enterprise journey as described by HFS? What makes you different or stand out?				
Execution and innovation capabilities:	Please describe your Al-driven offering(s)? What industries and use cases are you targeting? Which of these are in production versus pilots?	Strong machine learning capabilities Typically offshore- ocused with strong technical skills		Horizon 2+ Strong GenAl, LLMs, use cases, and	
The What? (25%)	What is your technology roadmap for GenAl? Describe any proprietary IP, frameworks, tools, solutions, and accelerators that you have. Please share your current client experiences with GenAl.			 capabilities Deep partnerships, including joint IP creation with AI technology leaders Strong frameworks for responsible and ethical AI Well-rounded capabilities across all value 	
	What other technologies (e.g., cloud, Web3, automation, metaverse) are important to deliver on the promise of Al?				
	Please describe the current strength of your trained resources on AI technologies? How is this expected to change in the next two years?			creation levers: talent, domain, technology, data, and change management.	
Go-to-market strategy:	How are you organized internally to develop your AI offerings and capabilities?	Primarily effort-based relationships	Horizon 1+ Increasing number of performance-based relationships in the portfolio	Horizon 2+	
The How?	Where are your main Al-related investments? (e.g., IP, partnerships, training, M&A)			Driving co-creation with ecosystem partnersStrong investments in GenAl	
(25%)	How are you making sure the use of AI is responsible and ethical?		·	Evidence of purpose-based (co-creation) partnerships with clients in addition to	
	Please describe your commercial model for AI offerings. Include the approximate percentage of effort-based (e.g., FTE-based, T&M), performance-based (e.g., gain-sharing, innovation funds), and purpose-based (e.g., co-creation with clients) in your portfolio. How do you expect it to change in the next two years?			increasing number of performance-based relationships in the portfolio	
	Please describe your AI ecosystem of partners. How do you plan to augment it for GenAI?				
Market impact: The So What?	How are you organized to develop your Generative Enterprise offerings and capabilities—centralized, regional, or by vertical?	Recognized as strong implementation vendors	Horizon 1+ Recognized as strategic partners by clients	Horizon 2 + Recognized as thought leaders by clients Referenceable and satisfied clients driving new business models with partnerships	
(25%)	Please share client experiences with Generative Enterprise.	 Referenceable and satisfied clients for ability 	Referenceable and satisfied clients for ability to execute and innovate		
, <i></i> ,	Voice of the customer	to execute			

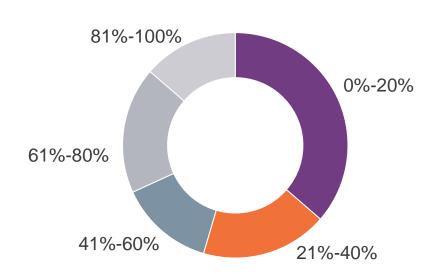
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Demographics and customer and partner data

The average shift in spending from AI to GenAI is already 41%

- We surveyed customer references provided by service providers to understand their current investments. GenAl budgets have primarily been carved out of Al budgets in 2023, and project scale remains small.
- Among enterprises surveyed, the average number of people involved in AI projects was just less than 20.
- The average amount of money spent on third parties to get projects done was about \$560,000.

Proportion of AI spending shifted to GenAI since 2023



Weighted average of spending that switched from AI to GenAI

41%

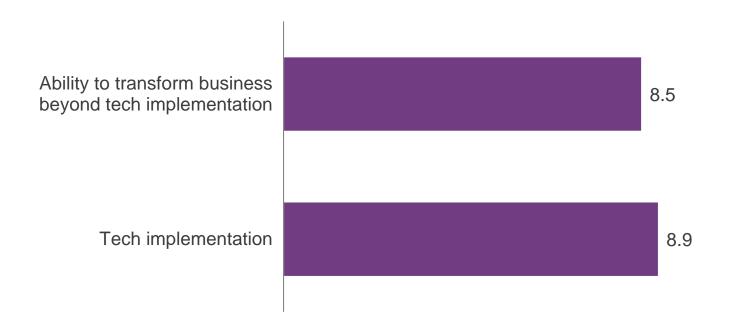
Sample: 31 customer references provided as part of the survey for this report Source: HFS Research, 2023

Service providers deliver on tech—less so on business change

Customer view: Gap between tech and transformation capabilities

Provider capabilities

Customer ratings of service providers—average out of 10



We asked 31 customer references to score their Generative Enterprise service providers on a scale of 1 to 10.

- Customers see a gap between how well their service providers deliver on tech implementation and their ability to transform business.
- Enterprises want this gap filled as they seek help on their journey to the Generative Enterprise. Knowing the tech is one thing; helping transform ways of working because of the tech is another altogether.

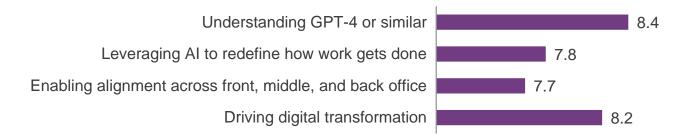
Sample: 31 customer references provided as part of the survey for this report

Partners see service providers through rose-tinted glasses

Customer view of what service providers best deliver

Provider capabilities

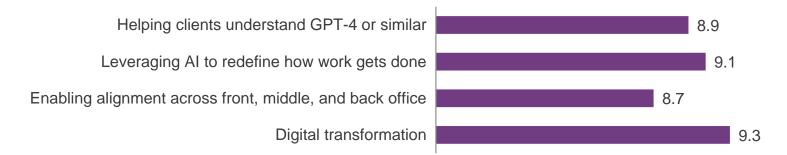
Customer ratings of service providers—average out of 10



Partner view of what service providers best deliver

Provider capabilities

Partner ratings of service providers—average out of 10



Sample: 47 GenAl partners and 31 customer references provided as part of the survey for this report

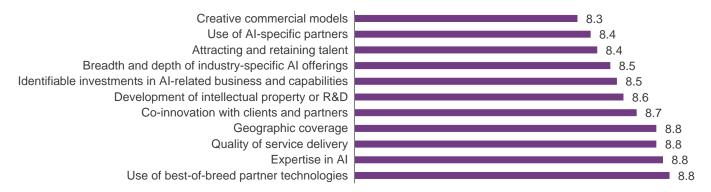
- Partners think the service providers they work with are doing a much better job than customers give them credit for.
- For example, customers score service providers an average of 8.4/10 for their capabilities in helping them understand GPT-4 (and similar next iterations) of GenAl. Partners score them close to 9/10.
- There's a gap across the four parameters we asked partners and customers to rate, indicating the need for service providers to question how well they are doing from the customers' point of view.
- The starkest example is the gap between views on how well service providers are helping clients leverage AI to redefine how work gets done. This gap reiterates the gap customers identify between capabilities in tech implementation and the ability to drive change (shown on the previous slide).

Partners and customers call out service provider talent issue

Customer ratings of service providers for delivery capabilities

Provider capabilities

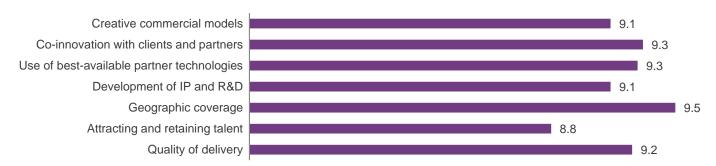
Customer ratings of service providers—average out of 10



Partner ratings of their service provider partners

Provider capabilities

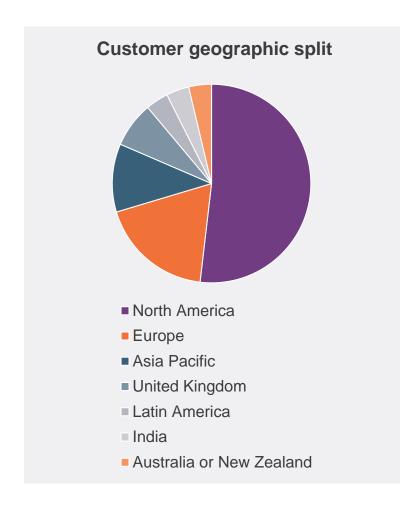
Partner ratings of service providers—average out of 10

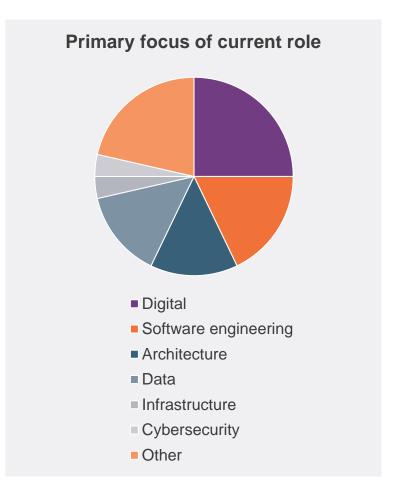


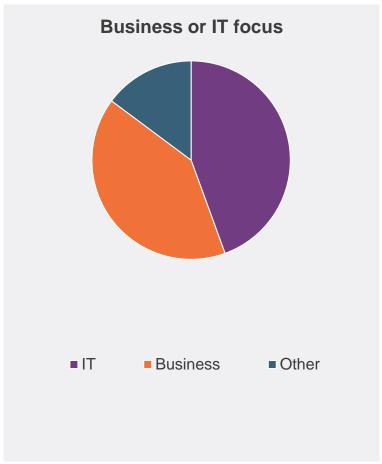
Sample: 47 GenAl partners and 31 customer references provided as part of the survey for this report

- Again, partners are happier to slap the backs of their service provider colleagues than service provider customers are.
- Partners and customers score service providers relatively low on attracting and retaining talent. It's a talent war out there!
- Partners and customers want more creativity when it comes to commercial models. GenAl lends itself to outcome models, but we aren't seeing the data reflect that yet.

Survey demographics (enterprise customer respondents)







Sample: 31 customer references provided as part of the survey for this report Source: HFS Research, 2023

Source. Til S Nesearch, 202

Horizons results: Generative Enterprise™ services, 2023

HFS Horizons—summary of Generative Enterprise service providers assessed in this report (1/2)

Providers (alphabetical order)	HFS point of view
Accenture	\$3 billion investment to apply GenAl and Al to industry's toughest challenges
Akkodis	A data and ROI governance focus to drive innovation
Amdocs	Taking GenAl deep into telco
Ascendion	Becoming a Generative Enterprise to help clients become Generative Enterprises
Bain	Helping enterprise leaders understand GenAl disruption to augment with it
Brillio	Quick start with vertical solutions and outcome-based pricing
Capgemini	Converting GenAl delivery experience into services for CX, strategy, software, and data privacy
Cigniti	Pushing back against the hype of GenAl with an expectation-setting reality stick
Ciklum	Agile engineering chops to get GenAl out of the blocks fast
Cognizant	Enabling human-machine creative collaboration

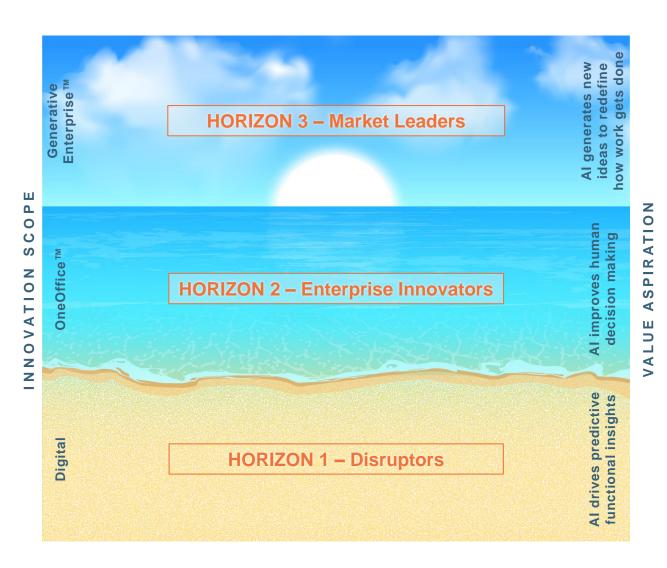
Providers (alphabetical order)	HFS point of view		
Deloitte	Value-led approach to integrating GenAl into Al strategy		
Eviden	Accelerating the GenAl journey with Al and cloud		
EXL	Data, AI, and domain chops for a vertical GenAI approach		
EY	Re-thinking how the enterprise works through AI and GenAI		
Genpact	Targeting the shift to outcome-driven processes		
HCLTech	Data-focused, experienced early adopter of all things AI		
Hitachi Vantara	Relatively slow starters must now prove considered approach will pay off with rapid market traction		
IBM	Serious AI chops show the way to the Generative Enterprise		
Infosys	Navigating from digital to an Al-first core infused with GenAl		
KPMG	Balancing and managing the GenAl risks and rewards		

HFS Horizons—summary of Generative Enterprise service providers assessed in this report (2/2)

Providers (alphabetical order)	HFS point of view
LTIMindtree	Platform approach with prompts, ethics, and other controls to de-risk GenAl
Movate	Helping customers learn the value of GenAl in CX
Mphasis	Listening and responding to clients' needs in customer service, developer productivity, and service desk transformation
NTT Data	Embedded GenAl—beyond innovation for transformation
Persistent	Data-led GenAl engineering expertise prepares the way ahead
Publicis Sapient	GenAl walks hand in hand with digital business transformation for CX and EX
PwC	Regulatory know-how to de-risk GenAl investments
Sonata	Responsible-first approach focused on governance

Providers (alphabetical order)	HFS point of view	
Sutherland	GenAl is just a tool to deliver better customer outcomes	
TaskUs	Deep LLM know-how focused on multiple CX cases	
TCS	Applying GenAl to level-up employees across the enterprise	
Tech Mahindra	Use-case-focused guidance for experimentation	
UST	Credible GenAl solutions built to keep bias out	
Wipro	Building digital-era Al-first intelligent enterprises	
WNS	Reduced-risk domain-focused GenAl through co-creation and outcome pricing	

HFS Horizons for Generative Enterprise Services, 2023



Horizon 3 market leaders enable the Generative Enterprise by leveraging AI to generate new ideas to redefine how work gets done

Horizon 3 service providers demonstrate

- Horizon 2 +
- · Strong GenAl and LLM models, use cases, and capabilities
- Ability to completely redefine how works done (e.g., 30%-70% additional productivity, autonomous data-driven decision making, inclusion of creative activities enabling enterprise-wide end-to-end scope)
- · Strong frameworks for responsible and ethical AI
- Driving co-creation with ecosystem partners
- · Well-rounded capabilities across all value creation levers: talent, domain, technology, data, and change management
- · Deep partnerships including joint IP creation with AI technology leaders
- · Strong investments in Generative AI
- · Evidence of purpose-based (co-creation) partnerships with clients in addition to increasing number of performance-based relationships in the portfolio
- · Recognized as thought leaders by clients
- · Referenceable and satisfied clients driving new business models with partnerships

Horizon 2 enterprise innovators enable the OneOffice by leveraging AI to improve decision making and driving unmatched stakeholder experience

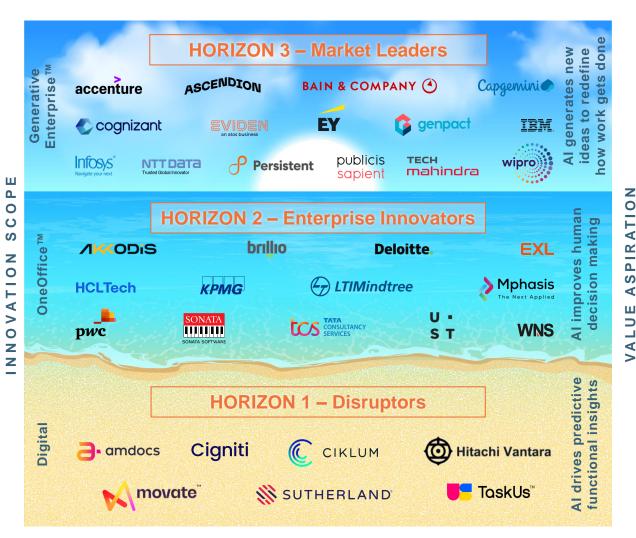
Horizon 2 service providers demonstrate

- Horizon 1 +
- · Strong ML, deep learning, natural language processing, and computer vision capabilities
- · Ability to help enterprises break down the silos of data across the enterprise, continuously find patterns, and maintain robust governance across all decision points
- · Enabling the OneOffice to significantly improve decision making driving unmatched stakeholder experience
- Increasing number of performance-based relationships in the portfolio
- · Market ready Al-driven proprietary tools, assets, and frameworks
- · Offshore and nearshore capabilities with both technical and consulting skills
- · Alliances with AI technology leaders
- · Recognized as strategic partners by clients
- · Referenceable and satisfied clients for ability to execute and innovate

Horizon 1 Disruptors drive digital transformation by leveraging AI to drive predictive functional insights Horizon 1 service providers demonstrate

- · Strong ML capabilities
- · Help enterprises understand the data, processes, and interactions needed to drive functional optimization
- · Primarily effort-based relationships
- · Recognized as strong implementation vendors
- · Typically offshore-focused with strong technical skills
- · Referenceable and satisfied clients for ability to execute

HFS Horizons for Generative Enterprise Services, 2023



Horizon 3 market leaders enable the Generative Enterprise by leveraging Al to generate new ideas to redefine how work gets done

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Note: All service providers within a "Horizon" are listed alphabetically

Cognizant profile: Generative Enterprise™ services, 2023

Cognizant: Enabling human-machine creative collaboration



Strengths

- Value proposition: Cognizant offers enterprise-ready GenAl technology and experience fusing Al and software engineering to deliver creative human-machine collaboration.
- Growth proof points: Proof points include a \$1 billion investment in scaling GenAl throughout the business. The Neuro Al platform was the first of its kind to market.. It has 200 early client engagements.
- Key differentiators: "Cognitive Architectures" blend GenAl with key technologies to deliver experiences, processes, operations, knowledge, and engineering.
- Outcomes: The \$800 million Gilead deal leverages GenAI. Case studies in production include resolving a US insurance company's customer queries with 97% accuracy.
- Customer kudos: Clients trust Cognizant. Its talent pool, knowledge of technology architecture, partner ecosystem, and domain knowledge are key strengths.
- Partner kudos: Partners praise Cognizant's dedication to co-innovation, commitment, flexibility, global support model, competitive pricing, and vertical knowledge.

Development opportunities

- What we'd like to see more of: Cognizant should leverage its engineering creds and devops expertise to lead customers from the focus on productivity toward the Generative Enterprise.
- What we'd like to see less of: Cognizant needs to work on its messaging to stand out in a sea of me-too offers. Identifying as "your post-evangelist partner" could make sense.
- **Customer critiques:** Client experience with Cognizant automation continues to focus on process automation. The newly created Enterprise Automation practice should help address bringing together business and IT.
- Partner critiques: Partners want Cognizant to focus on marketing, to improve the velocity of MSP services, enhance talent strategy, and bolster onshore executive presence.

Key offerings

- Enhance CX: Al-powered conversational assistants to automate and raise CSAT
- Empowered Workforce: Knowledge management and semantic search to unlock insight
- Streamline Ops: Streamline workflows for process improvement and productivity gains
- Design and Engineering: Enhance developer productivity to improve quality and innovation
- Process Orchestrator: Apply GenAl to optimize knowledge work tasks

Mergers and acquisitions (2019 - 2023)

- AustinCSI: Digital transformation company specializing in enterprise cloud and data analytics and advisory services (2022)
- **Servian:** End-to-end digital transformation with data analytics and AI (2021)
- Inawisdom: Data, AI, cloud, digital engineering, and IoT firm (2020)

Partnerships

- Google, Microsoft, Amazon
- Hugging Face, Sisense, OpenAI, Domo, Dataiku, Moogsoft
- Plainsight, VisualCiortex, Nvidia
- ServiceNow, Automation Anywhere, Blue Prism, UiPath
- IBM, Adobe, Salesforce, Databricks, Talend

Key clients

Number of clients: 650+ **Key clients**

- US-based investment and insurance company
- US-based mutual insurance company
- A leading pharma company Global European bank
- · Leading consumer goods company

Relevant global operations and resources

Excerpt for Cognizant

- Al-driven revenue: \$1.1 billion \$1.3 billion (2023), 20%-25% growth (2024) estimate)
- **Headcount:** Al specialists (15,000+), data scientists (1,250+), anticipated additional GenAl-trained associates (25,000+)
- Talent profile: Non-tech (20%), tech devs and experts (80%)
- Headcount growth locations: All geographies, especially in US, UK, and India
- Targeted industries: BFSI, CMT, healthcare and life sciences, retail, MLEU
- Al labs: Current (3) San Francisco, London, Sydney; planned Al R&D planned (3) San Francisco, London, Bangalore

Flagship internal IP

- 70+ patents and 100+ accelerators
- Neuro AI toolset for enterprise-grade AI includes Cognitive architectures: Solution design patterns for generative applications, data engineering, model orchestration, knowledge platforms, cloud and edge solutions, responsible AI solutions, and productivity accelerators across requirements, design, software, and ops



Further reading

Primers, advice, and guidance for the new world of GenAl

GenAl is very new to most enterprise leaders. In this report, you may read references to terms such as large language models (LLM), fine-tuning, prompt engineering, and other language that has only recently broken out of the Al lab. The HFS Points of View articles below provide primers and additional advice and guidance. Click each to read in full.



The dos and don'ts and potential costs of GenAl

David Cushman, Executive Research Leader

CEOs are under intense pressure to adopt generative artificial intelligence (GenAl) as their boards and shareholders look to them to solve <u>the digital dichotomy</u>. We've all lived through disruptive forces, but it's the sheer rate of acceleration of the capabilities, seen in examples such as ChatGPT and Midjourney, keeping CEOs up at night.

To ease your sleep, we have identified what you should and shouldn't do when determining how to integrate GenAl into your business—and how much you can expect to pay to use it. Yes, pay. For example, many of us have kicked the tires on ChatGPT in a free version. But ChatGPT costs \$700,000 a day to run. Someone has to pay, and it's going to be the enterprise.



Generative AI meets software development: the advent of generative coding

Joel Martin, Executive Research Leader

HFS predicts the rapid rise of "generative coding," which goes beyond the current use of generative artificial intelligence (GenAI) to convert code. Generative coding will embrace the automated creation, manipulation, conversion, and optimization of code. While humans will oversee the requirements and approve the delivery of outcomes, generative coding will intertwine human and machine coding practices throughout the software development lifecycle (SDLC) to craft composable applications and microservices that human and machine teams reintegrate as microservices—built for cloud deployment and curated by Kubernetes.



Generative AI offers personalization and loyalty across the enterprise—if you get it right

Lasse Rindom, Associate Practice Leader

Generative AI (GenAI) has exploded onto the business agenda with a promise of next-generation personalization. With it, enterprises could be on the verge of huge improvements in customer experience and employee experience. It enables more granular interactions and eventually makes every interaction a conversation—not just a message. To unlock the value, enterprise leaders must carefully manage how they access and apply personal data. Get this wrong, and hyper-personalization can result in creeped-out customers and employees running from you rather than buying into you.

More to read

Primers, advice, and guidance for new world of GenAl

Click each image below to read in full.



The bots ARE coming for your job after all

David Cushman, Executive Research Leader

Generative AI (GenAI) is coming for the opposite end of the jobs continuum from robotic process automation (RPA). RPA handles rote tasks, freeing teams to be more imaginative and allowing them to apply their creativity to solve the bigger problems businesses face. While this encourages us to rethink work, it does not demand it of us. It only chips away at the cheaper-to-perform tasks in our business processes.

But GenAl is coming for you and how you work. And if it's coming for you, you'd better rethink how work at the pricier end of the spectrum gets done and find yourself a role in that new reality while you are at it.



How business leaders can take control of the GenAl conversation

David Cushman, Executive Research Leader

Generative AI is rocking the business world. It summarizes, answers questions, creates content, and creates code—but what is it?

Any business leader facing the clamor to use generative AI (GenAI) should read our POV <u>Dos</u> and <u>don'ts</u> and <u>potential costs of GenA</u>I to understand appropriate use cases. But when an emerging technology arrives with the promise of cost take-out across the enterprise, it's worth taking a moment to get up to speed with the key terms so you can pull the conversation back into line when the techies start darting off into uncharted territories. What is it you are being offered when they tell you GenAI is the solution?

Let's start by establishing where GenAl sits in the world of artificial intelligence (Al). GenAl is a form of machine learning, and machine learning is a subset of Al. Let's be clear about what each of these terms describes.



Keep your options open when it comes to public or private LLMs

David Cushman, Executive Research Leader

Enterprise leaders are being sold generative AI (GenAI) tools on the promise of boosted productivity and more effective employees. To deliver, leaders are being asked to choose between public or private offerings when selecting a large language model (LLM). Both public and private models come with benefits and risks—but this is an extremely fast-moving landscape. Therefore, for success in the journey to The Generative Enterprise, it's important for enterprise leaders to consider composable architectures to keep their options open.

LLMs are the engines that enable GenAl to generate novel outcomes, such as summarizations, content, and code, drawing on the data provided. Public LLMs have more comprehensive access to data sets; for example, ChatGPT has millions of users adding content and challenging it with prompts every day. Private LLMs are limited to using the data defined by their stakeholders. The enterprise might prefer to only use data it trusts—list sown contracts, product documentation, or employee and customer information. For example, HFS Research, working with Humata, has deployed a private instance of an LLM across our research content. Try querying it for yourself on our website.

More to read

You and your teams should be using GenAl daily

Click each image below to read in full. Click the image on the far right to try HFS' LLM.



Generative AI will bring more humanity into the workplace

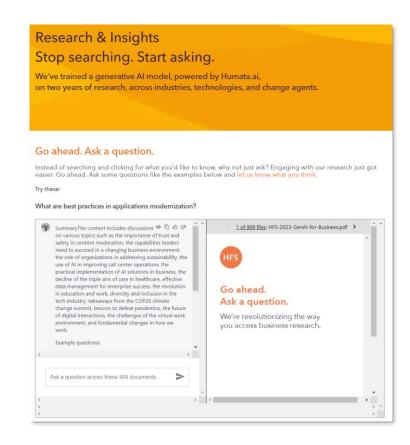
Dana Daher, Associate Practice Lead

In an era defined by <u>The Great Resignation</u>, work models changing by the minute, and the promise of artificial intelligence (AI) to enhance—<u>and potentially replace</u>—tasks, it has become clear that we are amid a paradigm shift in our approach to work. HFS has described this attack on workplace stability as <u>The Great Freakout!</u>

In this evolving landscape, enterprise leaders must find new ways to empower their workforce while driving new ways of working. Failure to do so may result in a disengaged workforce, reduced competitiveness, and a risk of being left behind.

Amid this unrest, AI, specifically generative AI (GenAI), has swept into the workplace as a powerful agent of change with the potential to fundamentally re-engineer all aspects of work while simultaneously bringing more humanity into the work—that's right, more, not less.





HFS Research authors

Phil Fersht, CEO and Chief Analyst, HFS

Phil Fersht is widely recognized as the world's leading industry analyst focused on the reinvention of business operations to exploit technological innovations and the globalization of talent.

He identifies change agents that enable organizations to streamline digital operations, access rapid and critical data to base decisions, and exploit the increasingly available global base of talent. He coined the term "Generative Enterprise™" in 2023 to articulate the pursuit of AI technologies based on large language models (LLMs) and ChatGPT to reap huge business benefits to organizations in terms of continuously generating new ideas, redefining how work gets done, and disrupting business models steeped in decades of antiquated processes and technology.



He has a global reputation spanning more than two decades for calling out the big trends, being unafraid to share his honest views, and driving a narrative on the technology and business services industries that shape many leadership decisions. His reputation drove him to establish HFS Research in 2010, which has today grown into one of the leading industry analyst and advisory firms and the undisputed leader in IT business services and process technologies research.

In 2012, he authored the first analyst report on robotic process automation (RPA), introducing this topic to the industry. He is widely recognized as the pioneering analyst voice that created and inspired today's RPA and process AI industry. Fersht coined the term "OneOffice™" in 2016 to describe HFS Research's vision for future business operations amidst the impact of cloud, automation, AI, and disruptive digital business models. OneOffice is the foundation of the hybrid (virtual-physical) workforce, where automation and AI tools augment the employees' digital capabilities and the workplace becomes a plug-and-play, work-from-anywhere scenario. Silos between the front, middle, and back offices are collapsed into a single office, where all employees are empowered and motivated by common outcomes and common values.

Prior to founding HFS in 2010, Phil has held various analyst roles for Gartner (AMR) and IDC and was BPO Marketplace leader for Deloitte Consulting across the United States. Over the past 20 years, Fersht has lived and worked in Europe, North America, and Asia, where he has advised on hundreds of operations strategy, outsourcing, and global business services engagements.

David Cushman, Exec Research Leader, HFS

David leads our Emerging Technology Practice, tracking OneOffice™ and OneEcosystem™ enablers from automation and AI, data and design thinking, process orchestration, workflow, and intelligence, metaverse, and Web3. He also engages in the impact of technology on how we work and on our employee experience.

David leads our HFS Hot Vendors program, too. Experienced in start-up, scale-up, and large-scale digital transformation programs, he has led digital development at the UK's fastest-growing media company, founded and grown digital consultancies across Europe and worked with world-class companies as a director in digital strategy advisory at a tier-1 services provider.



He is the author of *The 10 Principles of Open Business* (Palgrave Macmillan, 2014), and he holds a joint honors degree in Philosophy and Sociology from the University of Essex.

David lives in Cambridgeshire, UK, with his wife and daughter, and he enjoys reading, writing, traveling, and thinking (exploration of all kinds). He embraces change and always seeks the learning opportunity. But, for all that, he has supported Leeds United Football Club since he was seven years old. Some things just can't be unlearned.

HFS Research authors



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Saurabh Gupta is President, Research and Advisory Services at HFS. He sets the strategic research focus and agenda for HFS Research, understanding and predicting the needs of the industry and ensuring that HFS maintains its position as the strongest impact thought leader for business operations and services research. He oversees HFS' global research function managing the global team of analysts and operations across US, Europe, and Asia.



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Niti is a senior analyst at HFS Research. She works on competitive intelligence across IT and business process services. She joined us with more than six years of experience in market research. She holds an MBA degree specializing in Finance and Marketing and B.Tech in Information Technology. She is based out of Kolkata. In her spare time, she loves reading, travelling, and going for walks. On weekends she enjoys painting, spending time with her nephew and binge-watching series on Netflix.

About HFS Insight. Inspiration. Impact.

HFS is a leading global research and analysis firm trusted at the highest levels of executive leadership. Our mission is to help our clients tackle challenges, make bold moves, and bring big ideas to life by arming them with accurate, visionary, and thought-provoking insight into issues that impact their business.

Our analysts and strategists have deep, real-world experience in the subjects they cover. They're respected for their independent, no-nonsense perspectives based on thorough research, demand-side data, and personal engagements with industry leaders.

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