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From Strategy To Impact: Powering The Intelligent Enterprise With GenAI

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Generative AI (genAI) is driving business transformation by reshaping operations and unlocking unprecedented opportunities for efficiency, innovation, and growth. There is increased urgency for IT leaders to prioritize AI initiatives, invest in scalable data infrastructure to address accelerated data governance, quality and capacity, but also to ensure robust, trusted knowledge bases and upskilling to harness genAI's full potential. As we move genAI from a mode of data processing toward agentic AI possibilities, having the right architecture, data models, and scalability in place will be critical for success.

ENTERPRISES ARE ACTIVELY REALIZING THE VALUE IN GENAI IMPLEMENTATION AND EXPANSION

- **Over 90% of enterprise AI decision-makers have committed plans to implement internal operational and external customer-facing use cases.**[1] These plans are gaining momentum as new LLMs with better capabilities and frameworks to use agents become more mature with the ability to ingest various types of data and enable autonomous decisioning. Manufacturing and financial services firms for instance, have been leveraging genAI for core tasks of software development and testing, driving productivity and time to market forward.
- **Companies are evolving use cases toward customer experience with genAI through conversational AI and virtual assistants.** For example, the travel industry has cited examples of developing genAI tools to improve travel experience, assist customer support agents, and enhance internal team collaboration. Financial services has also been at the forefront of front-line customer service use cases, enabling faster case resolution for simple tasks, using conversational AI chatbots.[2]

GENAI USE CASES CUT ACROSS BUSINESS FUNCTIONS TO DRIVE PRODUCTIVITY AND EFFICIENCY

Most of the early wins with validated use cases in genAI have addressed traditional challenges that needed the scale and agility of LLMs to transform evidence into reality.

- **Leaders should augment business operations by unleashing business intelligence at scale.** One in two digital business decision-makers believe that driving data and insights in their decision-making is a core priority. The ease of using genAI to pull data and insights in the regular cadence of reporting and decision-making has simplified data-driven understanding of business operations and customers. Financial services firms, for instance, have been able to successfully automate and build efficiency in risk assessment reporting and compliance standards with existing data sets.[3] GenAI has streamlined the process of building internal knowledge bases to enable better self-service capabilities for employees to access the data they need, which drives improved employee efficiency and customer understanding. Operations leaders are also activating AI community of practices (CoP) to organize, orchestrate, and collaborate across the AI lifecycle and provide support for AI-embedded business practices. Similarly, external-facing knowledge bases enable early identification of trends that could provide opportunities for business growth or orchestrate responses to emerging threats more effectively.
- **Developers need to accelerate enterprise software development, testing, and deployment.** Traditional software development is often slow and iterative. Ideally, new features are tested and bugs are corrected before applications are deployed. But in reality, bugs often slip through the production process only to be discovered by end users — causing downtime, cost overruns, and reputation risk. When LLMs support developers in creating code, they integrate new features, generate tests, identify bugs, suggest fixes early in the development lifecycle, which avoids production downtime. Developers can also deploy LLMs to explore new ideas and find

optimal approaches, as well as to create documentation and make the code searchable, all of which add significant value to the software development life cycle.

- **Marketers blend content and data to make delivery more productive.** Eighty-five percent of marketing decision-makers are currently using genAI for marketing tasks and exploring genAI actively in their marketing organizations.[4] They say genAI enables them to deliver more with the same resources by increasing the productivity of marketing teams and agencies while making marketing service delivery more cost-efficient. In Asia, four out of five genAI marketing use cases are related to content development. Especially in this region, advertising content, creative briefs, and email content are among the top five uses for both brands and agencies.[5] The most advanced marketers are adding performance-focused use cases, such as media operations, code analysis, insights/data summaries, and content localization along with personalized content that has more potential for conversion.

CHALLENGES IN GENAI STRATEGY

GenAI shifted AI from a specialized IT project to a mainstream business opportunity. A company's genAI strategy needs to keep up with this shift and carefully balance requirements between new AI constituencies in business units and among everyday workers.

- **Decision-makers are often unsure of where to adopt AI within their organizations.** One in four marketing decision-makers cite that a key challenge in implementing genAI is a lack of understanding of where to adopt it effectively in their marketing organizations.[6] But that challenge doesn't sit within marketing alone —many AI leaders are unsure of how to hone in on the use cases that will provide value in both the short and long term. Leaders realize they need a strategy specifically to help navigate the plethora of use cases coming from AI experiments and proofs of concept. In many enterprises, this often has to be executed

while adhering to AI governance aspects such as regulatory requirements and explainability.

- **The rapid pace of development and unpredictability makes it difficult to visualize an end goal today.** While genAI is often used to boost end-user productivity, the time and effort required to learn these new and constantly evolving tools and models can be perceived as a deterrent. GenAI adoption involves effectively managing persistent change and turning setbacks into successes. Smart enterprises are embracing practices from other innovation efforts: They promote and reward adaptability as pilot projects reveal viability and what delivers the best ROI; and they encourage practitioners to share what they've learned to prioritize areas to drive the best near-term business impact. Teams must navigate a more pragmatic phase of adopting and integrating genAI capabilities into their workflows.
- **Existing data infrastructures are inadequate to scale AI.** Integrating genAI with existing data infrastructure can be a significant challenge: 31% of decision-makers cite inadequate data infrastructure and 22% cite difficulty in integrating genAI with existing infrastructure as key challenges to effectively adopting genAI.[7] This is further complicated by the need for scalable data modeling and architecture to support genAI applications along with GPUs where low latencies are required. A modernized data infrastructure is also needed to create the strong data foundation required for context-aware responses and to minimize risk of hallucinations with retrieval-augmented generation (RAG) architectures for genAI applications.
- **Firms question the quality of data in AI models.** A significant challenge for business leaders in 2025 is the quality and the source of data in AI models.[8] Firms have legitimate concerns about incorporating their data into LLM training data sets and how proprietary data is treated when fed into an LLM. AI-generated synthetic data being used in training can also pose additional

risks, while public LLMs can sometimes produce results that are irrelevant or incorrect due to biases and misinformation in their training data. The lack of explainability in generative models makes it difficult for enterprises to troubleshoot undesirable results.

- **An organization's knowledge base is critical to ensuring genAI delivers.** The internal data AI relies on must be current, accurate, and trusted to produce effective and productive business results. Companies are relying on AI foundational models for language that are pre-trained LLMs as part of their larger application ecosystems. RAG architectures or fine-tuning is critical as they combine retrieval mechanisms with generative models to access and incorporate up-to-date and domain-specific information, while keeping enterprise IP safe from the LLMs that use it as part of their training data. AI systems retrieve relevant documents or data from knowledge stores in vector databases to inform and ground the generative process.
- **Firms must measure outcomes and outputs beyond productivity.** There remains a lack of trustworthiness and authenticity in genAI outputs, especially among content use cases and in insights developed. Nearly half of business decision-makers view governance and risk (i.e., intellectual property protection, copyright infringement) as top factors with the potential to slow or limit the use of genAI for short-term content. GenAI sometimes leans toward mimicry rather than innovation, which can lead to inaccuracies in outputs. This issue is particularly pronounced for teams exploring new topics or are focused on innovation.
- **GenAI is not a magic wand for improving employee productivity.** A top-planned use case for genAI is to increase employee productivity. Current estimates note that genAI will enhance four and a half times more jobs than it will replace.[9] Doing so requires choreographing a dance between the employee and the software to make the tool useful. Human factors rightly drive business leaders' concerns: "Do employees have the right skills to develop,

deploy, operate, and govern AI systems? Do they understand AI ethics and privacy? Do they trust the AI systems?" The onboarding is not just that of a new technical capability, but of a new generation of workforce.

BEST PRACTICES TO DRIVE THE IMPACT OF GENAI

Business and technology decision-makers share that one of the top challenges to adopting emerging technology is communicating the expected value from the investment. This means they must define why GenAI is being used and what the expected business outcome is. Once that is achieved, they can lean on the following best practices to capture that value:

- **Actively prioritize and optimize use cases in partnership with business stakeholders.** Prioritizing use cases that address the needs and strengths across business, data, AI governance, and tech stakeholders is imperative for the sustainability of genAI adoption and success. Stakeholders must collaborate to define and develop an adaptable strategy for generating measurable business outcomes.

- **Invest in data modeling and scalable architecture.** Investing in advanced data modeling and scalable architecture is essential to support genAI applications. Forrester's research highlights the importance of scalable infrastructure, with some AI models requiring terabytes of data and thousands of GPUs to achieve the necessary quality and speed.[10] Early adopters of genAI have fostered competitive advantage by building solutions that leverage a combination of public LLMs, open-source models, and additional data to meet their specific business needs. This investment ensures that AI models can both handle large-scale data and deliver accurate and contextualized results

while protecting a company's proprietary data assets.

- **Improve accuracy by developing a trusted, effective knowledge base and evolving models.** Techniques like RAG will combine retrieval mechanisms with generative models to better incorporate up-to-date and domain-specific information. Developing effective knowledge bases from both large data sources and evolving models enhances the accuracy and relevance of AI outputs. This integration helps to eliminate the tendency of LLMs to hallucinate and ensure more reliable, context-aware responses.

- **Train, upskill, and enable the humans.** Today's genAI solutions' probabilistic behavior require human reviewers and a high degree of human intervention. However, only 43% of employees who were surveyed on their future of work indicated that they are aware of how and when to question genAI outputs.[11] Consistent upskilling, training, and governance are vital for effective genAI adoption. Forrester's research emphasizes the need for structured corporate training programs and continuous skills development.[12]

Find out more from Forrester's research:

The State Of Generative AI, Forrester Research, Inc., January 26, 2024

Generative AI Marketing Use Cases In APAC, Forrester Research, Inc., June 20, 2024

Critical Actions To Advance GenAI Marketing Adoption, Forrester Research, Inc., July 18, 2024

Generative AI Is Revolutionizing Messaging — But Not How You Think, Forrester Research, Inc., December 17, 2024

Scale AI Value With The Use Case Selection Framework, Forrester Research, Inc., August 12, 2024

Layers, Gates, Pipes, And Loops: A GenAI Application Architecture, Forrester Research, Inc., November 13, 2023

Architecting Your Infrastructure For AI, Forrester Research, Inc., December 11, 2023

With Agentic AI, Generative AI Is Evolving From Words To Actions, Forrester Research, Inc., August 8, 2024

Appendix A: Endnotes

[1] Source: The State Of Generative AI, 2024, Forrester Research, Inc., January 26, 2024.

[2] Source: The State Of GenAI In Financial Services, 2024, Forrester Research, Inc., June 4 2024.

[3] Source: The rise of agentic AI in financial services: from automation to autonomy, Moody's, March 4, 2025.

[4] Source: Generative AI Marketing Use Cases In APAC, Forrester Research, Inc., June 20, 2024.

[5] Source: Generative AI Marketing Use Cases In APAC, Forrester Research, Inc., June 20, 2024.

[6] Source: Generative AI Is Revolutionizing Messaging — But Not How You Think, Forrester Research, Inc., December 17, 2024.

[7] Source: Winning With AI In B2B Go-To-Market Strategies, Forrester Research, Inc., July 31, 2024.

[8] Source: Smarter Together: Trends In AI For B2B Marketing, Forrester Research, Inc., November 2024.

[9] Source: Forrester's 2023 Generative AI Jobs Impact Forecast, US, Forrester Research, Inc., August 30, 2023.

[10] Source: Architecting Your Infrastructure For AI, Forrester Research, Inc., December 11, 2023.

[11] Source: Forrester's Future Of Work Survey, 2024.

[12] Source: How To Design An Effective Learning Strategy For Workforce Generative AI, Forrester Research, Inc., December 12, 2024.

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