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Scaling generative AI: What is holding organizations back?

Moving promising generative AI initiatives beyond the proof-of-concept stage is undeniably challenging, but tremendous business value awaits organizations that overcome the obstacles to success.



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The potential of generative artificial intelligence (AI) is widely recognized, but many organizations encounter significant roadblocks when they attempt to move their projects from proof of concept (POC) to operationalization and expansion.

Developer environments are often not conducive to experimenting with solutions at scale. Further complicating the effort are complex data privacy concerns, mounting security risks, and constantly evolving regulations.

To overcome these obstacles, enterprises need clear strategies for aligning generative AI use cases with their business goals. They also need access to the resources necessary to build, scale, and fast-track trustworthy, secure, compliant solutions.

Hurdles to clear

Taking a generative AI initiative beyond POC requires deft navigation. Many organizations lack the environment and the tools necessary for developers to ensure that the infrastructure they've built will support broader use of the AI model. They need the capability to test it in a real-world setting to assess its functionality when integrated with existing organizational systems and workflows.

There is also the need to guard the privacy of sensitive data while enabling its safe use in the context of appropriate sharing of generative AI results. Typically, personally identifiable information (PII) must be effectively masked to prevent its association with individuals. Because privacy is viewed as a human right in many parts of the world, governments have enacted a variety of laws and regulations that require strict compliance. To adhere to those multifaceted provisions, organizations must

establish robust security measures, constantly monitoring for threats and intrusions, and responding quickly and decisively when incidents occur.

The fundamental question facing many organizations is whether scalability, privacy, security, and compliance can **all** be achieved cost-effectively in ways that justify deployment of a generative AI solution. In other words, can it deliver enough business value to satisfy key stakeholders?

The path to generative AI maturity

Realizing the potential of generative AI depends on identifying the use cases that will deliver the greatest value. Typically, organizations want to prioritize those that will drive revenue growth, reduce costs, and enhance customer experiences. The use cases must be selected to align with business objectives, and the generative AI strategy and model must be designed to realize meaningful business value.



The next step in the journey is to assemble the resources necessary to optimize a project at scale. Both high-quality, reliable data and advanced computational processors are essential for gleaming meaningful results from AI algorithms.

Organizations can acquire prebuilt AI solutions and services from technology providers if their goal is to speed integration of AI capabilities into their existing products and processes. Or they can choose from a wealth of open-source AI tools that can help them build custom solutions at significantly reduced costs.

Accessing expert guidance

The overall generative AI spectrum comprises:

- **Knowledge discovery.** Management of knowledge concentration, summarization, extraction, and classification
- **Business function optimization.** Embedding of generative AI models in business processes and use of automation to improve their effectiveness
- **Personalized augmentation.** Specialist co-pilots designed to orchestrate work with contextual awareness

Few companies have all the specialized skill and knowledge in-house that's necessary to take their generative AI initiatives all the way from POC to testing, operationalization, optimization, and successful scaling across the enterprise.

[TCS](#) guides organizations along every stage of the generative AI project development journey, from strategy development to customization and deployment. It starts with identification of use cases and proceeds to creation of a blueprint in the context of the

organization's overall value chain. Managing risk means building a model that conforms to stringent information security standards. At the foundation of the TCS approach is the realization that success requires designing and building to accommodate constant change.

Fostering a culture of collaboration and innovation is integral to generative AI success. A strong governance model ensures regulatory compliance and operation with appropriate bias mitigation guardrails. TCS strives to align all stakeholders — business leaders, technology experts, legal teams, and compliance professionals — around a unified AI strategy.

TCS has a strategic partnership with Amazon Web Services ([AWS](#)) and leverages its services — including Amazon Bedrock, Amazon SageMaker, and Amazon Q. These solutions help organizations build generative AI applications, accelerate software development, and leverage internal data to increase productivity, transform customer experiences, and optimize business processes.

TCS and AWS together offer organizations expert deployment guidance and enable customers to scale their AI POCs into successful production implementations, as well as provide a powerful boost to their generative AI initiatives.

Businesses that embrace this transformative approach will be able to better navigate the complexities of AI adoption and unlock its full potential, moving from concept to value realization.

Get on the path to generative AI with an approach that aims for mature, stable, and responsible delivery of business value. Visit [here](#) for more information.