MASTERING GENERATIVE AI

Understanding the Differences Between "Everyday" and "Game-changing" Generative AI and Tackling Implementation

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As generative artificial intelligence (GenAI) continues to evolve at a breakneck pace, the Department of the Air Force's Office of the Chief Information Officer (DAF OCIO) and Chief Data and Artificial Intelligence Office (CDAO) have defined GenAI as branching into two distinct categories: "everyday" and "game-changing" GenAI.

These categories serve as a valuable framework for organizations to categorize their use cases. They enable stakeholders to grasp the varying levels of expected business impact, implementation complexity, and organizational change required. Most organizations will likely discover a mix of both everyday and game-changing use cases, which is crucial for informed prioritization and planning of GenAI initiatives.

Before embarking on the journey to mastering GenAI, however, it's essential to grasp the fundamental differences between these two categories, determine which type of GenAI capabilities best suits your organization's needs, and understand the common challenges that can hinder successful implementation.

EVERYDAY GENAI VS. GAME-CHANGING GENAI:

What's the Difference?

Everyday GenAI, as defined by the DAF OCIO and CDAO, focuses on enhancing daily workforce productivity. It encompasses general-purpose use cases such as report summarization, content generation for memos and presentations, document editing, and customer service enhancements through chatbots.

These applications are typically supported by commercially available services like ChatGPT, Google Gemini, and Microsoft Copilot, which can integrate seamlessly into office productivity suites. The key advantages of everyday GenAI solutions are their accessibility and ease of integration, requiring relatively minimal configuration to deliver substantial benefits in terms of efficiency and operational streamlining.

Game-changing GenAI is geared towards addressing high-value, mission-critical functions, including complex workflows, long-running processes like supply chain optimization, and operations involving highly sensitive information. Unlike everyday GenAI, game-changing applications often require significant data integration and custom development, utilizing advanced components such as large language models (LLMs), retrieval augmented generation (RAG), and cloud-native architectures.

Game-changing GenAI is not just about automating tasks, but delivering strategic, disruptive outcomes that can transform operational effectiveness.

WHERE SHOULD YOU FOCUS YOUR GENAI EFFORTS?

Everyday GenAI, Game-changing GenAI, or Both?

Most organizations have a portfolio of business use cases and workflows that could benefit from AI. Some of those needs can be met by everyday GenAI, while others may call for a game-changing GenAI solution. That means evaluating those use cases to determine where to focus your efforts and when is a critical early step of the AI adoption journey. It could be that you anticipate high ROI by focusing on everyday GenAI first, or that you have mission critical needs (e.g., life and death scenarios such as in healthcare or on the battlefield) for which a game-changing GenAI solution cannot wait.

Here are some questions you should be able to answer when making this determination, divided into everyday vs. game-changing GenAI:

Everyday GenAI

1. What are the common repetitive tasks that could be automated to enhance productivity?
Identify tasks that are time-consuming and repetitive across different departments that could benefit from automation.

2. What is the current level of digital literacy among your workforce?
Assess whether employees are comfortable with using new technologies and whether training is needed.

3. Are your IT infrastructure and platforms capable of integrating with commercially available AI services?
Evaluate the ability of your existing enterprise solutions to integrate with new GenAI technologies without significant upgrades.

4. What information privacy and security policies are in place at your organization, and how may they impact the use of external AI services?
Consider the privacy and security controls that must be in place when using third-party AI services, to maintain regulatory compliance and a strong information security posture.

5. What is the expected ROI from implementing the requisite AI solutions?
Determine the financial and operational benefits that may be achieved vs. the cost of upfront implementation and long-term sustainment.

Game-changing GenAI

1. What are the specific, high-value problems that we aim to solve with AI?
Identify strategic areas where AI could drive significant improvements or innovations.

2. Do we have access to the required quality and quantity of data to train or interact with sophisticated AI models?
Assess the data resources available for training and refining AI models specific to your needs.

3. What is the level of expertise available in-house for developing and maintaining advanced AI models?
Consider whether you have the necessary talent or if you need to hire or partner with external experts.

4. How will AI deployment align with and support the organization's long-term strategic goals?
Align AI initiatives with the broader strategic goals of the organization to ensure they contribute to long-term success.

5. What are the ethical considerations and potential societal impacts of deploying such AI technology?
Evaluate the ethical implications and societal impacts of deploying advanced AI, including issues of bias, fairness, and accountability.

6. What is the scalability of the AI solutions being considered, and can they adapt to changing conditions and scales?
Plan for scalability and flexibility in AI solutions to accommodate growth and changing business conditions.

It's worth noting that most organizations are much closer to being ready to implement everyday GenAI vs. game-changing GenAI. It's also true that experimenting with use cases for the former will help prepare your organization to implement the latter.

THE CHALLENGES OF IMPLEMENTING GENAI

Governance, Risk, and Compliance

At ECS, we embarked on our GenAI journey with a clear focus on governance, risk management, and compliance. By establishing a Responsible & Ethical AI Board, ECS set protocols to mitigate risks like data leakage. This ensured our GenAI applications conform to ethical standards and organizational policies.

Cost Control

ECS has taken a two-pronged approach to minimize the cost of implementing GenAI. First, our employees are permitted to use CIO-approved commercial everyday GenAI services that are free of charge or minimally expensive. Second, we've developed a chat assistant that currently supports everyday GenAI use cases and integrates with open-source LLMs hosted on secure platforms. This allows ECS to maintain control over our data while avoiding hefty expenses associated with premium commercial services.

This two-pronged approach not only reduces operational costs but also ensures that sensitive information remains within the organizational boundary, addressing significant security concerns.

Training and Collaboration

To foster a smooth adoption of GenAI, ECS emphasizes the importance of training and collaboration. We recommend an agile, sprint-based approach to GenAI application development and end-user adoption, focusing on building minimum viable products that demonstrate immediate value. Additionally, hands-on training and sandbox environments are crucial for employees to understand and effectively utilize GenAI capabilities.

Measuring Success and Responsible Use

Selecting the right metrics to measure the success of GenAI implementation is as challenging as it is essential. ECS uses user surveys and telemetry data to assess the effectiveness of our GenAI initiatives, ensuring that these technologies meet the intended goals. Moreover, the responsible use of AI is a continuous concern, particularly with LLMs where the lack of transparency can be problematic in applications requiring explainability.

Mastering GenAI With ECS

Beyond ECS' proven expertise in delivering AI/ML solutions in both federal and commercial contexts, our journey to mastering GenAI within our own organization can serve as your roadmap to success.

As you navigate the complexities of GenAI adoption, leverage these insights to balance innovation with responsibility and cost-effectiveness, then realize the full, transformative potential of GenAI.

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ECS is a leading information technology provider delivering solutions in cloud, cybersecurity, software development, IT modernization, and science and engineering. The company's highly skilled teams solve critical, complex challenges for customers across the U.S. public sector, defense, and commercial industries. ECS maintains partnerships with leading cloud and cybersecurity technology providers and holds specialized certifications in their technologies.

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