

# Identify the Strategic Benefit, Cost and Risk of Generative AI Use-Case Types

Published 15 September 2023 - ID G00800343 - 11 min read

By Analyst(s): Nate Suda, Rita Sallam

Generative AI use cases to improve competitive position can be classified as quick wins, differentiating or transformative based on their benefit, cost and risk profile. CIOs can use this typology to quickly identify and classify a GenAI use case, and take steps to mitigate the significant risks.

## Overview

### Key Findings

Generative AI (GenAI) can have impact on an organization's competitive position in three different ways:

- Quick wins can be gained from GenAI productivity assistants targeting specific tasks, but must be integrated into business processes to provide lasting benefit.
- Competitive differentiation and longer-lasting benefits can be achieved by organizations that embed GenAI in domain, custom and industry applications to improve specific business processes.
- Transformational change may result in competitive advantage from the creation of new markets, products, business models and value streams based on GenAI.

### Recommendations

CIOs seeking to work with their executive team on GenAI investments to improve competitive position should:

- Use quick win use cases to accelerate GenAI adoption and achieve incremental time savings for specific tasks with low cost and low risk.
- Use competitive differentiation use cases to advance longer-lasting business outcomes such as higher customer satisfaction and retention with moderate-to-high cost and risk.

- Use transformative use cases to create new products and new market categories and realize new revenue with extremely high cost and risk.

## Analysis

This research is a contextualization of Assess the Value and Cost of Generative AI With New Investment Criteria. Please refer to that for detailed cost and benefit assumptions. This note is aimed specifically for CIOs and the investment conversations they will have with executive leadership teams.

## Introduction

CIOs are increasingly asked by their executive teams about GenAI and where appropriate investments should be made for their organizations. Most CIOs need better practices, prioritization frameworks and funding decisions models. They should use the following criteria to segment GenAI investments into one of three types based on their cost, benefit and risk profile, and evaluate the cost and risk associated with each type.

- **Quick win** use cases are fast to deploy (in some cases, as simple as purchasing a license). They have clear and, usually, fixed costs per user, and they have benefits in terms of time savings and a low risk profile to create a positive financial business case.
- **Competitive differentiation** use cases have variable costs, time-savings benefits and a direct impact on business outcomes, but they also have a higher delivery cost and risk profile and greater risk that scope creep can exponentially increase costs without increasing business benefits.
- **Transformative** use cases have significant costs and potential benefits in terms of creating new products, product categories and disrupting markets, but a very high risk profile.

## Strategic Planning Assumptions

- By 2025, growth in 90% of customized enterprise deployments of GenAI will slow as costs exceed value, resulting in pressure on vendors to introduce innovations and pricing models.
- By 2026, more than 80% of independent software vendors (ISVs) will have embedded GenAI capabilities in their enterprise applications, up from less than 1% today.
- By 2028, more than 50% of enterprises that have built their own large models from scratch will abandon their efforts due to costs, complexity and technical debt in their deployments.

## Quick Wins: Type 1 Use Case

Quick wins can be gained from GenAI consumed in applications such as GenAI productivity assistants, but must be integrated into business processes to provide lasting benefit.

Financial ROI and productivity calculations for quick wins are straightforward time savings investment cases (sometimes with marginal quality improvements, as well). Typically the costs will be fixed monthly subscriptions. Benefits will be task-specific and based on time savings per employee, which can result in higher productivity, with additional longer-term benefits of decreased need to hire additional staff over time or headcount reduction (see Table 1).

**Table 1: Sample Cost Factors, Benefit Measure and Return Type for Quick Win Use Cases**  
(Enlarged table in Appendix)

Use Cases	<ul style="list-style-type: none"> <li>■ Coding assistant</li> <li>■ Knowledge worker (brainstorming, drafting and editing documents)</li> <li>■ Marketing content creation</li> </ul>
Benefit Measures	<ul style="list-style-type: none"> <li>■ Incremental time savings per employee in specific roles, which stakeholders must convert into financial returns</li> </ul>
Cost Factors	<ul style="list-style-type: none"> <li>■ Per user license cost (e.g., Microsoft Copilot, Jasper.ai or Forethought)</li> <li>■ Incremental costs for data management, risk management and security</li> <li>■ Training and change management</li> <li>■ Content assurance and benefit realization measurement</li> </ul>
Risks	<ul style="list-style-type: none"> <li>■ Scope risk: There may be expectations for enterprisewide deployment even for job roles that do not create a positive business case, which must be avoided.</li> <li>■ IP and confidentiality risks: Staff will need training and guidance not to upload sensitive information into a public large language model (LLM).</li> </ul>

Source: Gartner

## Recommendations

To mitigate the specific risks of quick wins, CIOs should:

- Create fusion teams to identify use cases, especially with business and functional unit leaders, middle managers and task experts (see [Fusion Teams: A Proven Model for Digital Delivery](#)). This will take more creativity than business process engineering surveys of the past, so include creative and uninhibited thinkers in your organization.
- Clarify funding rules for the direct and indirect incremental technology costs with finance and business unit teams, and create a baseline of GenAI costs. This baseline will be essential as an organization moves to the competitive differentiation use cases where cost measurement becomes much more complex.

- Draft acceptable use guidelines with general counsel to address the particular IP and confidentiality risks associated with public LLMs (see [Generative AI: 4 Decisions to Make When Creating a Policy](#)). For example, there is the risk of staff uploading company confidential information (code, trade secrets, commercially sensitive information) into a public or private LLM and how that information is shared in the organization.

## Competitive Differentiation: Type 2 Use Case

Competitive differentiation and longer lasting benefits can be achieved by organizations that embed GenAI in domain, custom and industry applications to improve specific business processes (see Table 2).

Financial ROI calculations for differentiating use cases depend on variable consumption of GenAI capabilities, variable pricing and platform costs. One element of consumption costs is the number and length of prompts, and pricing is often based on that aggregate volume. In addition, the price per token can vary, leading to challenging and unpredictable pricing models for CIOs and potentially exponential costs.

Business cases need careful scenario planning to assess the lower and upper user and use-case adoption limits that would still enable a positive business case and guidelines on when to terminate projects if they exceed cost estimates. Identification of use cases will need specific and firm scope boundaries to ensure costs are incurred only by high-value-adding activities. While benefit measures still include time savings, they also include effectiveness increases for KPIs that directly contribute to strategic goals, such as customer satisfaction and increased revenue.

**Table 2: Sample Cost Factors, Benefit Measures and Return Type for Differentiating Use Cases**

(Enlarged table in Appendix)

Use Cases	<ul style="list-style-type: none"> <li>■ GenAI-assisted customer support for productivity and increased cross-sell</li> <li>■ Personalized sales content creation for productivity and more time selling</li> </ul>
Benefit Measures	<ul style="list-style-type: none"> <li>■ Marginal time savings per employee to virtual employee (full replacement) in specific roles</li> <li>■ Incremental revenue generated from saved time used for selling</li> <li>■ Marketplace advantages, e.g., higher selling price, greater volume, greater wallet share</li> <li>■ Time savings and higher effectiveness, such as improvement of the quality of each call, leading to higher satisfaction and retention, and, potentially, new revenue from more selling time and cross-selling during calls</li> </ul>
Cost Factors	<ul style="list-style-type: none"> <li>■ Per agent or per person GenAI license, with some including consumption on a per word per prompt basis, with the expectation that pricing volatility will continue</li> <li>■ Potentially significant enabling investments in resource cost (data scientists, devs, and security and data managers); infrastructure (cloud and AI); and data management (data quality and modeling, data labeling and vector databases)</li> <li>■ Agile training in new processes or prompt engineering</li> <li>■ Organizations facing significant labor shortage and high resource costs throughout the value chain</li> </ul>
Risks	<ul style="list-style-type: none"> <li>■ Cost exposure with the expectation of opaque and high-margin pricing for the LLM platforms to which your custom software will connect</li> <li>■ Scope risk that significant benefits in some use cases will create a demand for other use cases that would see productivity gains, but at unworkable costs. There will be increasing internal pressure to invest in unproven or negative business cases, which must be avoided</li> <li>■ Availability and time risk as the capability becomes widely available at an accessible cost and nondifferentiating before sufficient return can be realized</li> <li>■ Workforce anxiety among workers likely within some job families, which could diminish productivity and indirectly impact the business case</li> </ul>

Source: Gartner

## Recommendations

To mitigate the specific risks of differentiating use cases, CIOs should:

- Conduct POCs that clearly define what is excluded from scope, and model the upper limits of licensing consumption costs at scale to address the risk of higher and more unpredictable costs and risks.
- Partner with HR and talent leaders to identify the positive and negative effects on job roles and job families (see [Plan for Generative AI's Impact on Jobs](#)).

## Transformative: Type 3 Use Case

Transformational change can result in competitive advantage from new GenAI products, GenAI-enabled products, and business models, but it comes at very high cost and risk.

Investment criteria should prioritize strategic value, not productivity gains, and recognize a substantial delivery and cost risk. While ongoing innovations in GenAI are refining models and techniques and slowly bringing down adoption costs, these are still extremely high. If organizations decide to pursue transformative use cases, the business case will require significant strategic bets (see Table 3).

**Table 3: Sample Cost Factors, Benefit Measure and Return Type for Transformative Use Cases**

(Enlarged table in Appendix)

Use Cases	<ul style="list-style-type: none"> <li>■ New products and creation of new market categories and business models</li> <li>■ Fundamentally new value stream creation for existing products and services (e.g., BloombergGPT)</li> </ul>
Benefit Measures	<ul style="list-style-type: none"> <li>■ New revenue in new or existing markets</li> <li>■ Entry into new markets or expansion of existing markets</li> </ul>
Cost Factors	<ul style="list-style-type: none"> <li>■ FTEs and consumption of LLMs through APIs using fine-tuning or compute cost to build, train/retrain, run and maintain a custom LLM.</li> <li>■ Potentially significant enabling investments in resource cost (data scientists, devs, and security and data managers); infrastructure (cloud and AI); data management (data labeling and vector databases); and underlying system changes to support new processes.</li> <li>■ Maintenance and validation of the model for bias and drift.</li> <li>■ Risk management, security, governance and auditing of GenAI.</li> <li>■ Note that there are emerging trends that will lower costs, and more will emerge over time. These include prompt-tuning, retrieval augmented generation (RAG), open-source and small models.</li> <li>■ Custom-made LLMs may have greenhouse gas emissions that would be significant in an organization's ESG materiality assessment.<sup>1,2</sup></li> </ul>
Risks	<ul style="list-style-type: none"> <li>■ Delivery risk: It is likely that a very high proportion of custom-made LLM projects will be abandoned in the medium term due to costs, complexity and technical debt.</li> <li>■ Resource risk: Organizations will face significant labor shortages and high resource costs throughout the value chain. Upskilling existing talent will be needed due to market availability of talent.</li> <li>■ Cost volatility and/or supply chain risks: Demand is high for the platforms and hardware (chips) that LLMs require. Expect premium pricing and/or supply chain shortages.</li> <li>■ Legal and regulatory risks: These are emerging, but expect particular use cases and/or jurisdictions to be highly regulated, which may curtail use-case viability.</li> </ul>

Source: Gartner

## Recommendations

To mitigate the specific risks of transformational use cases, CIOs should:

- Create a tiger team, including executive, corporate strategy, and business and technology thought leaders to identify and assess strategic shifts that GenAI could create in their markets. As understanding of the application of this technology increases, so will the variety of strategic shifts. The CIO should co-lead this with the CEO or a business unit leader and meet regularly.
- Socialize the need for a higher risk tolerance and new investment criteria that prioritize strategic value over task- or process-specific productivity benefits.
- The CIO must work with general counsel and regulatory affairs to understand the impact of existing and potential new regulations and legislation on proposed GenAI use cases, particularly in the areas of bias <sup>3</sup> and intellectual property <sup>4</sup>; data retention and disposal <sup>5</sup>; and regulation of this new technology <sup>6</sup> (see [What Legal and Compliance Leaders Need to Know About Large Language Model Risks](#)). At time of writing, there are regulatory changes in the U.S. <sup>7</sup> (and separately in California <sup>8</sup>), the U.K., <sup>9</sup> the EU and Brazil. <sup>10</sup> There are national governance frameworks in Canada, Japan and Singapore; strategies to become world leaders in the UAE and China; bans in Russia, China, North Korea, Cuba, Iran and Syria; <sup>11</sup> and Italy briefly banned ChatGPT. <sup>12</sup> In addition, does not permit certain countries from accessing its APIs. <sup>13</sup> The global regulatory framework will become more complex. CIOs should coordinate the work of the executive tiger team, general counsel and regulatory affairs in agreeing on the impact of legislation on GenAI use cases so the CIO can stay in front of concerns that will emerge. In time, CIOs may decide to recommend their companies get involved at a policy level or create an industry consortium to favorably influence regulatory policy.

## Evidence

<sup>1</sup> [How to Make Generative AI Greener](#), Harvard Business Review.

<sup>2</sup> [Generative AI's Hidden Cost: It's impact on the environment](#), Nasdaq.

<sup>3</sup> [The Problem With Biased AIs \(and How To Make AI Better\)](#), Forbes.

<sup>4</sup> [Generative AI Has an Intellectual Property Problem](#), Harvard Business Review.

<sup>5</sup> [What to Know About Sharing Company Data With Generative AI](#), Forbes.



<sup>6</sup> [EU AI Act: First Regulation on Artificial Intelligence](#), European Parliament.

<sup>7</sup> [Italy Became the First Western Country to Ban ChatGPT. Here's What Other Countries Are Doing](#), CNBC.

<sup>8</sup> [California Seeks to Be First to Regulate Business Use of AI](#), Bloomberg.

<sup>9</sup> [With ChatGPT Hype Swirling, U.K. Government Urges Regulators to Come Up With Rules for AI](#), CNBC.

<sup>10</sup> [Tech Roundup: Experts Say AI Regulation Bill Is Born Dated](#), Brazilian Report.

<sup>11</sup> [These Are the Countries Where ChatGPT Is Currently Banned](#), Digital Trends.

<sup>12</sup> [Exclusive: Italy Watchdog to Review Other AI systems After ChatGPT Brief Ban](#), Reuters.

<sup>13</sup> [Supported Countries and Territories](#), OpenAI.

## Recommended by the Authors

[Assess the Value and Cost of Generative AI With New Investment Criteria](#)

[Research Roundup for Generative AI](#)

[How to Choose an Approach for Deploying Generative AI](#)

[Toolkit: Discover and Prioritize Your Best AI Use Cases With a Gartner Prism](#)

[How to Pilot Generative AI](#)

[Plan for Generative AI's Impact on Jobs](#)

[Generative AI: 4 Decisions to Make When Creating a Policy](#)

© 2023 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner is a registered trademark of Gartner, Inc. and its affiliates. This publication may not be reproduced or distributed in any form without Gartner's prior written permission. It consists of the opinions of Gartner's research organization, which should not be construed as statements of fact. While the information contained in this publication has been obtained from sources believed to be reliable, Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information. Although Gartner research may address legal and financial issues, Gartner does not provide legal or investment advice and its research should not be construed or used as such. Your access and use of this publication are governed by [Gartner's Usage Policy](#). Gartner prides itself on its reputation for independence and objectivity. Its research is produced independently by its research organization without input or influence from any third party. For further information, see "[Guiding Principles on Independence and Objectivity](#)." Gartner research may not be used as input into or for the training or development of generative artificial intelligence, machine learning, algorithms, software, or related technologies.

Table 1: Sample Cost Factors, Benefit Measure and Return Type for Quick Win Use Cases

Use Cases	<ul style="list-style-type: none"><li>■ Coding assistant</li><li>■ Knowledge worker (brainstorming, drafting and editing documents)</li><li>■ Marketing content creation</li></ul>
Benefit Measures	<ul style="list-style-type: none"><li>■ Incremental time savings per employee in specific roles, which stakeholders must convert into financial returns</li></ul>
Cost Factors	<ul style="list-style-type: none"><li>■ Per user license cost (e.g., Microsoft Copilot, Jasper.ai or Forethought)</li><li>■ Incremental costs for data management, risk management and security</li><li>■ Training and change management</li><li>■ Content assurance and benefit realization measurement</li></ul>
Risks	<ul style="list-style-type: none"><li>■ Scope risk: There may be expectations for enterprisewide deployment even for job roles that do not create a positive business case, which must be avoided.</li><li>■ IP and confidentiality risks: Staff will need training and guidance not to upload sensitive information into a public large language model (LLM).</li></ul>

---

Source: Gartner

Table 2: Sample Cost Factors, Benefit Measures and Return Type for Differentiating Use Cases

Use Cases	<ul style="list-style-type: none"><li>■ GenAI-assisted customer support for productivity and increased cross-sell</li><li>■ Personalized sales content creation for productivity and more time selling</li></ul>
Benefit Measures	<ul style="list-style-type: none"><li>■ Marginal time savings per employee to virtual employee (full replacement) in specific roles</li><li>■ Incremental revenue generated from saved time used for selling</li><li>■ Marketplace advantages, e.g., higher selling price, greater volume, greater wallet share</li><li>■ Time savings and higher effectiveness, such as improvement of the quality of each call, leading to higher satisfaction and retention, and, potentially, new revenue from more selling time and cross-selling during calls</li></ul>
Cost Factors	<ul style="list-style-type: none"><li>■ Per agent or per person GenAI license, with some including consumption on a per word per prompt basis, with the expectation that pricing volatility will continue</li><li>■ Potentially significant enabling investments in resource cost (data scientists, devs, and security and data managers); infrastructure (cloud and AI); and data management (data quality and modeling, data labeling and vector databases)</li><li>■ Agile training in new processes or prompt engineering</li></ul>

	<ul style="list-style-type: none"> <li>■ Organizations facing significant labor shortage and high resource costs throughout the value chain</li> </ul>
Risks	<ul style="list-style-type: none"> <li>■ Cost exposure with the expectation of opaque and high-margin pricing for the LLM platforms to which your custom software will connect</li> <li>■ Scope risk that significant benefits in some use cases will create a demand for other use cases that would see productivity gains, but at unworkable costs. There will be increasing internal pressure to invest in unproven or negative business cases, which must be avoided</li> <li>■ Availability and time risk as the capability becomes widely available at an accessible cost and nondifferentiating before sufficient return can be realized</li> <li>■ Workforce anxiety among workers likely within some job families, which could diminish productivity and indirectly impact the business case</li> </ul>

Source: Gartner

Table 3: Sample Cost Factors, Benefit Measure and Return Type for Transformative Use Cases

Use Cases	<ul style="list-style-type: none"><li>■ New products and creation of new market categories and business models</li><li>■ Fundamentally new value stream creation for existing products and services (e.g., BloombergGPT)</li></ul>
Benefit Measures	<ul style="list-style-type: none"><li>■ New revenue in new or existing markets</li><li>■ Entry into new markets or expansion of existing markets</li></ul>
Cost Factors	<ul style="list-style-type: none"><li>■ FTEs and consumption of LLMs through APIs using fine-tuning or compute cost to build, train/retrain, run and maintain a custom LLM.</li><li>■ Potentially significant enabling investments in resource cost (data scientists, devs, and security and data managers); infrastructure (cloud and AI); data management (data labeling and vector databases); and underlying system changes to support new processes.</li><li>■ Maintenance and validation of the model for bias and drift.</li><li>■ Risk management, security, governance and auditing of GenAI.</li><li>■ Note that there are emerging trends that will lower costs, and more will emerge over time. These include prompt-tuning, retrieval augmented generation (RAG), open-source and small models.</li></ul>

## Risks

- Custom-made LLMs may have greenhouse gas emissions that would be significant in an organization's ESG materiality assessment. <sup>1,2</sup>
- Delivery risk: It is likely that a very high proportion of custom-made LLM projects will be abandoned in the medium term due to costs, complexity and technical debt.
- Resource risk: Organizations will face significant labor shortages and high resource costs throughout the value chain. Upskilling existing talent will be needed due to market availability of talent.
- Cost volatility and/or supply chain risks: Demand is high for the platforms and hardware (chips) that LLMs require. Expect premium pricing and/or supply chain shortages.
- Legal and regulatory risks: These are emerging, but expect particular use cases and/or jurisdictions to be highly regulated, which may curtail use-case viability.

Source: Gartner