

# Want *maximum value* from FinOps in the cloud

Now is the time to leverage generative AI

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## In brief

- FinOps has become vitally important in terms of improving and increasing visibility into overall cloud spend and efficiency, helping to optimize cloud costs and governance, and to maximize business value: the addition of generative AI (GenAI) technology to cloud FinOps programs can significantly improve FinOps practices.
- Six use cases where GenAI might have the most immediate impact on cloud FinOps are described. Across all use cases, data quality, explainability, and continuous learning will contribute to successful GenAI integration and ROI discovery.
- Five essential pillars for building an effective GenAI implementation roadmap are explored; key challenges are also noted.

Across the financial services industry, the benefits of cloud adoption have been huge and are incontrovertible – including speed, agility, and scalability. But as usage has increased, so too have issues related to understanding and managing costs. In response, adoption of cloud FinOps is essential for organizations that want to maximize the value of their cloud investments, achieve financial accountability, align technology with business goals, and drive operational efficiency. It's not just about cost savings – it's about making informed decisions that lead to better business outcomes and sustained growth in the cloud.

Given recent and rapid advancements in artificial intelligence powered technologies, the addition of GenAI technology to cloud FinOps programs can significantly improve FinOps practices – including more intelligent forecasting, resource optimization, anomaly detection, and enhanced decision-making.



## Creating value-led FinOps with GenAI

FinOps in the cloud is still a relatively new practice area, and with the promise of GenAI being even newer and less mature in many areas, where does an organization begin to explore the possibilities? Six use cases are quickly described where GenAI might have the most immediate impact on cloud FinOps within your organization. As in all applications of GenAI, data quality, explainability, and continuous learning will be essential to ensuring optimal implementation and understanding of return on investment.

**Intelligent forecasting.** GenAI models can be used to analyze historical cloud usage, patterns, market trends, and business projections.

**Anomaly detection.** AI algorithms have the ability to help detect unusual spikes and unexpected changes in spend; they can also identify potential overspending, billing errors, and even potential corrective actions.

**Automated cost optimization.** GenAI can provide intelligent recommendations; identify waste and underutilization; implement reserved instances or saving plans, or even architectural changes.

**Workload placement and pricing model optimization.** GenAI can aid in the analysis of multiple cloud program attributes including pricing models, usage patterns, market benchmarks, most favorable cloud provider pricing, workload performance, and the strategic placement of workload.

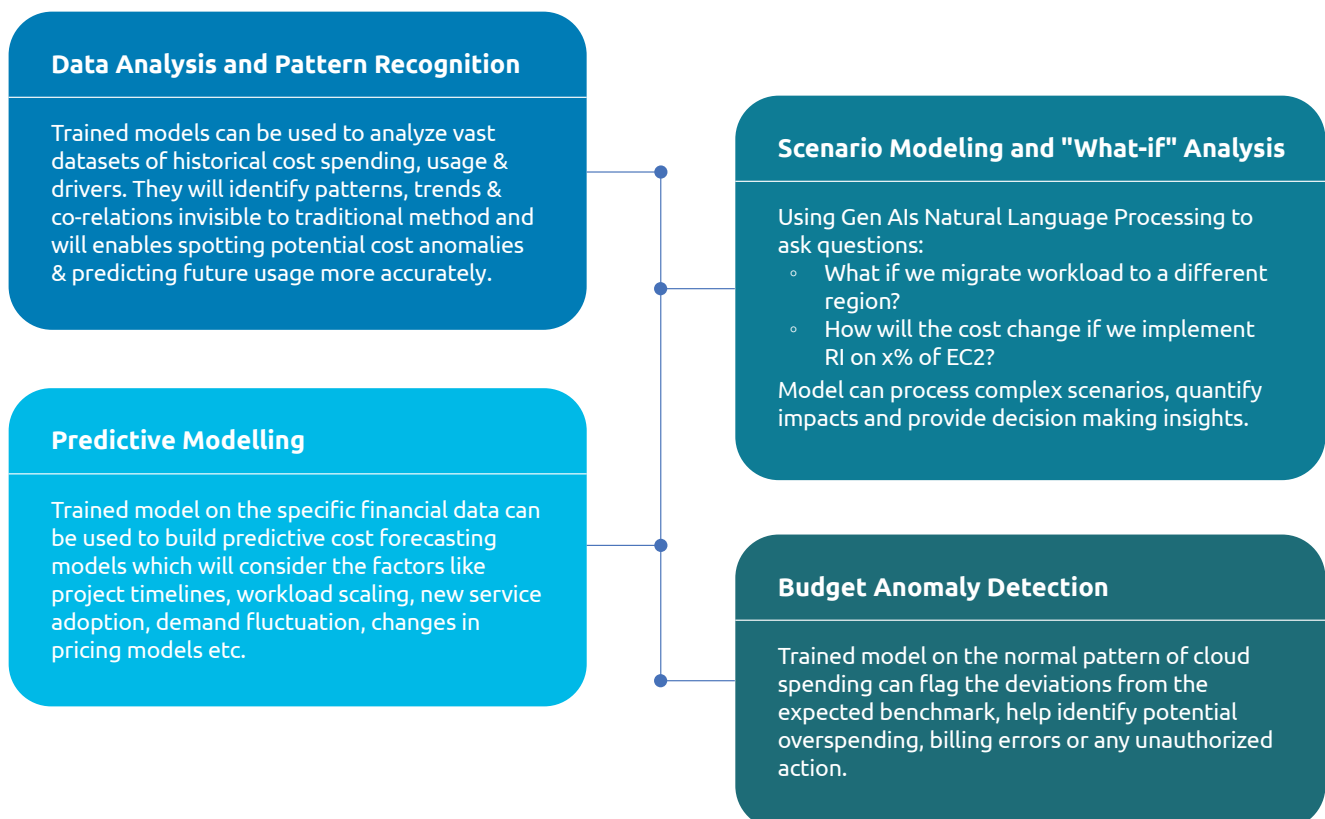
**Spend attribution and reporting.** Large language model driven GenAI can analyze unstructured data such as invoices and billing reports, categorize spend cost allocations, generate highly customized reports, and contribute to better visibility and accountability.

**Communication and collaboration.** Chatbot functionality powered by GenAI can help FinOps teams, engineers, and finance departments communicate more effectively about cloud costs. Chatbots can provide real-time cost insights, answer questions, and help track optimization efforts.

## Use case closer look: intelligent forecasting

### Gen AI in action for Intelligent Forecasting

To generate more accurate and flexible financial forecasts, taking cloud cost dynamics into account using Gen AI



# Current and relevant GenAI models for FinOps

Out-of-the-box GenAI models specifically tailored for use in FinOps are not readily available today. However, a quick synopsis of how a financial services enterprise might leverage existing models and resources to kickstart efforts with GenAI in FinOps follows.

## Foundational large language models (LLMs)

### GPT-3 (and variants)

- Generating insightful FinOps reports based on raw cost data
- Answering questions about cloud costs in natural language (for FinOps chatbots)
- Extracting relevant information from cloud billing documents

### CODEX ( or similar)

- Suggesting code changes for cost-optimized cloud infrastructure
- Generating documentation on FinOps-related code and processes

## Adapting pre-trained AI models

### Anomaly detection models

- Models trained for fraud detection or cybersecurity can be applied to identify unusual spending patterns or billing errors

### Time-series forecasting models

- Models used to predict sales or market trends can be adapted to forecast cloud costs with higher accuracy than traditional methods

### Classification models

- Models for categorizing customer interactions or support tickets might be adapted to classify and allocate cloud costs to specific projects or departments

## Cloud provider AI services

### AWS, Azure, GCP

- Major cloud providers offer pre-built AI/ML services; explore potential use cases within FinOps at your organization



# Moving forward with GenAI and FinOps on the cloud

Of course, financial services institutions today are operating at differing maturity levels when it comes to both FinOps and GenAI; therefore, every organization will have to shape its own approach to exploring and employing GenAI based on current needs and objectives. A carefully constructed strategic roadmap is essential to success: consider the following pillars and supporting tenets for successfully implementing Gen AI for FinOps within your enterprise.

## Build a strong foundation

- Build a strong FinOps culture, ensuring alignment of teams across IT, finance, and the business
- Implement a robust cloud-cost monitoring system
- Recruit and develop skilled talent with both FinOps and AI/ML understanding

## Identify high-impact use cases

- Identify and focus on areas where GenAI can have tangible impact
- Collect inputs from stakeholders on pressing needs and challenges

## Execute iteratively

- Start small and drive iterative implementation efforts
- Run small POCs to test the potential value of GenAI solutions
- Define and then measure clear metrics for success

## Insure continuous leadership and oversight

- Establish a dedicated taskforce for GenAI exploration and integration
- Stay informed about evolving AI regulations across the industry and beyond

## Maintain a keen focus on data

- Source and employ diverse and high quality data sets
- Ensure all data is properly licensed
- Collaborate with domain experts to enhance data sets as you move forward

The GenAI in FinOps journey described should yield significant return on investment – but that is not to say that the effort will always be easy. Certainly, there are challenges to be addressed as a business moves ahead:

- GenAI is still a young and growing technology, and so organizations' understanding of its potential value and best practices in implementation continue to evolve
- No matter what approach is taken, the training of the supporting models for specific business objectives and outcomes takes time
- Resource investment – time, financial, people – is required and is not insignificant depending on the scope of needs

# In conclusion

## Intelligent strategies for FinOps will help to leapfrog you forward

Generative AI has rapidly emerged as an important business technology and a transformative force across many industries, and GenAI has the potential to significantly augment cloud FinOps processes. It also offers the possibility of more proactive, predictive, and prescriptive cost management. And as GenAI technology and fluency continues to mature, we expect even more sophisticated and impactful applications to come within this domain.

Now is the time to embrace GenAI as a key enabler of cloud FinOps at your organization. We hope you find this paper of interest and that it sparks dialogue across your teams. Capgemini's GenAI and FinOps experts would welcome opportunity for a conversation: please don't hesitate to be in touch.

## Meet our experts



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