



# Scaling AI:

## A CIO's Blueprint for Budgeting, Risk Mitigation, and Value Creation

As the CIO of a large enterprise, the rapid evolution and adoption of AI, particularly generative AI and agentic AI, present both immense opportunities and significant challenges.

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# 01 Introduction

Enterprises are increasingly prioritizing AI, with a clear readiness to allocate specific budgets for testing and building AI agents in 2025.

Over

**60%**

are already moving **from pilots to production**, with a significant push expected in the next 6-12 months.

*The focus is shifting towards human-AI collaborative approaches, with a recognition that while autonomous AI gathers headlines, **a well-thought-out human + AI approach is more sustainable and ethical.***

Organizations are redesigning workflows to capture value from GenAI and are actively working to mitigate **growing AI-related risks, such as:**



Inaccuracy



Cybersecurity



Intellectual property infringement

The global AI market is projected for substantial growth, with enterprise AI applications showing increasing retention rates after 12 months. This signals a fundamental shift in how enterprises operate and compete.

For a large enterprise, budgeting for AI adoption at scale requires a nuanced approach that balances ambitious innovation with practical considerations of cost, risk, and value realization.

Businesses often underestimate AI project costs by

**500% to 1000%**

when scaling from pilot to production, making a detailed breakdown of expenses critical.

Here are the top 5 key considerations towards budgeting for AI adoption on scale, with an emphasis on licenses, tools, and provisioning expenses:



## Strategic Alignment and Value Prioritization:

Not all AI initiatives deliver equal value. A scattered approach to AI adoption will lead to wasted resources. Budgeting must be tightly coupled with the enterprise's overarching strategic objectives, focusing on use cases that promise the highest ROI and directly contribute to key business goals like **enhanced customer experience, operational efficiency, new revenue streams, or competitive advantage.**

This includes a clear understanding of both direct cost savings and indirect benefits like improved decision-making, faster time-to-market, and enhanced employee productivity.

### Cost of Licenses, Tools, and Provisioning:

This consideration primarily impacts the selection of licenses and tools. Choosing open-source AI frameworks (e.g., TensorFlow, PyTorch, Hugging Face models) can significantly reduce direct licensing fees, but will increase provisioning costs for computing and hosting, and may require more in-house talent for deployment and maintenance.

Conversely, proprietary AI platforms (e.g., IBM Watson Studio, Dataiku, H2O.AI, Domino Data Lab) or cloud-based AI services (e.g., Google Vertex AI, AWS SageMaker, Azure AI Services) come with recurring subscription or usage-based fees (e.g., \$1,000 to \$100,000+ per month for platforms, \$0.01–\$0.06 per 1,000 tokens for LLM APIs like GPT-4).

Custom AI solutions can range from **\$50,000 for basic implementations to over \$2 million for enterprise-level systems.** Provisioning expenses will vary based on whether you opt for cloud (pay-as-you-go) or on-premises (high upfront capital expenditure for hardware like GPUs/TPUs, ranging from **\$0.50–\$40 per hour for GPU/TPU instances**) infrastructure, and the complexity of the AI model.



### CIO's Action to Minimize Risk and Drive Value:

**The CIO must champion a portfolio approach to AI implementation. To build momentum and demonstrate early wins, begin with high-impact, low-complexity use cases.**

This means working closely with business unit leaders to identify specific problems AI can solve and quantify the potential benefits (e.g., "reduce customer service call volume by X%", "improve supply chain forecasting accuracy by Y%").

Establish clear KPIs and metrics for each AI project from the outset. Conduct rigorous cost-benefit analyses for each proposed AI investment, explicitly factoring in licensing models (per-user, per-transaction, per-API call, per-model, or subscription-based), tool integration costs, and projected infrastructure provisioning.

Explore outcome-based pricing models with vendors, linking compensation to achieved business results.

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### Data Strategy and Infrastructure Readiness:

AI models are only as good as the data they are trained on. A significant portion of the budget will be dedicated to **data acquisition, cleaning, preparation, storage, and governance**.

This includes investing in robust data pipelines and data lakes/warehouses and ensuring data quality, accessibility, and security.

The choice between cloud-based infrastructure (e.g., **AWS, Azure, GCP**) or on-premises solutions also significantly impacts costs and scalability.

Data acquisition and preparation alone can range from **\$10,000 for a small pilot to \$1 million for large-scale projects**.





### Cost of Licenses, Tools, and Provisioning:

Data-related tooling includes data management platforms, ETL tools, data quality software, and data cataloging solutions. These can have their own licensing fees (e.g., enterprise data governance suites, data virtualization tools).

Cloud storage costs (e.g., **AWS S3**, **Azure Blob Storage**) are usage-based and typically billed per GB and access. Data transfer costs between cloud regions or from on-prem to cloud must also be provisioned.

For AI-specific data preparation, tools for **data labeling**, **annotation**, and **synthetic data generation** may have per-unit or subscription costs. Provisioning expenses include compute resources for data processing (e.g., **Spark clusters on Databricks at \$0.20–\$6/hour**, or custom VM instances), and the networking bandwidth required for moving large datasets.

### CIO's Action to Minimize Risk and Drive Value:

**The CIO must ensure a strong data foundation. This involves allocating budget for data quality initiatives, master data management, and data governance frameworks to ensure data is accurate, consistent, and compliant.**

Invest in **scalable cloud infrastructure** that offers flexibility and pay-as-you-go models to avoid large upfront capital expenditures.

Prioritize secure cloud storage solutions and robust data synchronization.

Develop a clear strategy for what data can and should be used for AI models, especially large language models, and what needs to be kept separate due to privacy or regulatory concerns.

Leverage **cloud cost management tools** (e.g., **Azure Cost Management**, **AWS Cost Explorer**) to monitor and optimize data storage and processing expenses.



## Talent Acquisition, Upskilling, and Change Management:

AI adoption isn't just about technology; it's about people.

The budget needs to account for attracting and retaining AI specialists (**data scientists**, **ML engineers**, **AI architects**), as well as upskilling the existing workforce to effectively use and interact with AI tools.

This also includes significant investment in **change management** to address employee concerns, build trust, and foster a data-driven, AI-enabled culture.

**Talent costs can represent 40–60% of total project costs**, with senior AI engineers commanding **\$150,000–\$250,000 annually**.



### **CIO's Action to Minimize Risk and Drive Value:**

**The CIO should establish a hybrid talent strategy, balancing internal AI Centers of Excellence with strategic partnerships with AI service providers.**

#### **Cost of Licenses, Tools, and Provisioning:**

While primarily human-centric, this area still has tool-related costs. This includes licenses for AI development environments (**IDEs, notebooks**), collaboration tools, and specialized AI/ML platforms (e.g., **JupyterHub, Databricks Workspace**).

Online learning platforms and certification programs for upskilling the workforce will have subscription fees.

Provisioning expenses here relate to providing adequate computing resources for developers and data scientists (e.g., GPU-enabled virtual machines or specialized workstations) and access to necessary cloud services and APIs for their development work.

Allocate substantial budget for comprehensive training programs, workshops, and coaching to demystify AI and demonstrate its value to employees.

Focus on tools that **augment human capabilities** and reduce "toil" rather than replacing jobs, which help with adoption and morale.

Implement a robust change management plan, clearly and transparently communicating AI benefits, and ensuring leadership buy-in and advocacy across the organization.

Invest in internal talent development programs, which can cost **\$15,000–\$30,000 per employee** but reduce external hiring needs.



## Ongoing Operational Costs, Maintenance, and Scalability: —

The initial investment in AI infrastructure and development is just the beginning.

**Ongoing costs include** model training and fine-tuning, data storage and management, API usage fees (especially for generative AI models), monitoring, security, and regular updates. As AI adoption scales, these operational costs can grow significantly.

**Businesses routinely face higher-than-expected ongoing costs.**



### Cost of Licenses, Tools, and Provisioning:

This is a major area of recurring expenses. Continued licensing for deployed AI models, monitoring tools (e.g., model drift, performance, bias), MLOps platforms (for continuous integration/delivery of ML models), and security tools for AI systems. This could include per-call or per-token usage for generative AI APIs (e.g., OpenAI, Anthropic Claude, Google Gemini on Vertex AI), where costs can quickly escalate with high volume (e.g., \$0.003 to \$0.06 per 1,000 tokens depending on model and vendor). Automated expense management tools (some AI-powered) can help monitor and flag policy violations, leading to better cost control.

Recurring compute costs for model inference (running the AI models in production), retraining, and fine-tuning. This often involves sustained use of GPUs/TPUs, especially for large models. Cloud provider resources like provisioned throughput units (PTUs) for AI models (e.g., in Azure AI Foundry) are charged hourly, making cost optimization crucial. Data ingress/egress charges, network bandwidth, and ongoing data storage fees for maintaining updated datasets for model retraining. Automated Kubernetes cluster optimization tools and services can help manage and reduce cloud computing costs by optimizing resource allocation and scaling.



### CIO's Action to Minimize Risk and Drive Value:

**The CIO needs to plan for continuous budget allocation for AI maintenance and operations.**

This involves setting up robust monitoring and optimization frameworks for AI models to ensure their continued performance and cost-effectiveness. Explore usage-based pricing models with vendors where appropriate and negotiate bulk discounts for high-volume API usage. Implement agile methodologies for AI development to allow for flexibility and cost control. Regularly evaluate AI solutions to ensure they continue to deliver value and consider deprecating or optimizing those that no longer meet ROI targets. Design systems with scalability in mind from day one, anticipating growth in usage and data volumes, and utilizing auto-scaling features in cloud environments to optimize resource provisioning.



## Risk Management, Governance, and Ethical AI: —

As AI becomes more pervasive, so do the risks associate with **data privacy, security, intellectual property infringement, bias, and regulatory compliance**. Budgeting must include investments in **robust AI governance frameworks, legal counsel, audit procedures, and tools for monitoring and mitigating these risks**.



### **Cost of Licenses, Tools, and Provisioning:**

This category directly involves specialized tools and professional services. This includes licenses for AI governance platforms, bias detection and mitigation tools, explainable AI (XAI) tools, privacy-enhancing technologies (PETs) for data, and enhanced cybersecurity solutions specifically for AI systems (e.g., for protecting against adversarial attacks). Tools for intellectual property scanning and compliance checks for generated content also fall here.

Costs are also associated with secure environments for AI development and deployment — potentially isolated cloud environments or specialized on-premise infrastructure for highly sensitive data or models. Regular security audits and penetration testing of AI systems will incur service fees. Legal counsel and compliance consulting fees are significant provisioning expenses for establishing robust governance.

### **CIO's Action to Minimize Risk and Drive Value:**

**The CIO must lead the charge on Responsible AI (RAI).**

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Allocate budget for developing and implementing clear AI governance policies that cover data privacy, security, transparency, fairness, and accountability. Invest in tools and processes for continuous monitoring of AI outputs for bias and inaccuracy. Partner with legal and compliance teams to ensure adherence to evolving AI regulations. By proactively addressing these ethical and risk considerations, the CIO not only minimizes potential financial and reputational damage but also builds trust in AI, which is crucial for widespread adoption and long-term value creation. This also involves conducting thorough security audits and implementing robust access controls for AI systems and the data they use.

In this new era of AI at scale, the CIO's true differentiator lies not just in adopting innovation, but in architecting it responsibly with clear-eyed budgeting, rigorous risk governance, and an unwavering focus on business value.

# About the author

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## **Brijesh Prabhakar**

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Brijesh Prabhakar serves as the Executive Vice President and Chief Operating Officer at Movate, where he leads the Digital Services Delivery Unit, which includes Digital Infrastructure Services (DIS), Digital Engineering Services (DES), Enterprise Product Services (EPS), and Cloud & Data Services (CDS). He also oversees critical support functions such as Corporate Quality and Service Readiness.

With over 27 years of global experience, Brijesh brings deep expertise in strategic delivery leadership, large-scale transformation programs, and operational excellence. At Movate, he is focused on driving intelligent service models, scaling delivery operations, and integrating AI across the services landscape to deliver greater value to clients. His leadership style is rooted in collaboration, innovation, and continuous improvement, helping advance Movate's commitment to next-generation service excellence.

A forward-looking technology leader, Brijesh has spent the past decade building practices in Customer Experience, Privacy, and AI. He has led the development of enterprise-grade AI platforms and holds multiple patents in AI applications for software engineering and optimization. Throughout his career, he has led business-critical programs across geographies, consistently driving innovation, process rigor, and high-impact outcomes. Outside of work, Brijesh is passionate about chess, history, and art. He enjoys playing badminton and hockey, and values spending quality time with his family.

## About Movate

Movate is a digital technology and customer experience services company committed to disrupting the industry with boundless agility, human-centered innovation, and a relentless focus on driving client outcomes. Recognized as one of the most awarded and analyst-accredited companies in its revenue range, Movate helps ambitious, growth-oriented companies across industries stay ahead of the curve by leveraging its world-class talent of over 12,000+ full-time Movators across 21 global locations and a gig network of thousands of technology experts across 60 countries, speaking over 100 languages.

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