Beyond the ChatGPT Hype: Deploying Generative AI in the Enterprise

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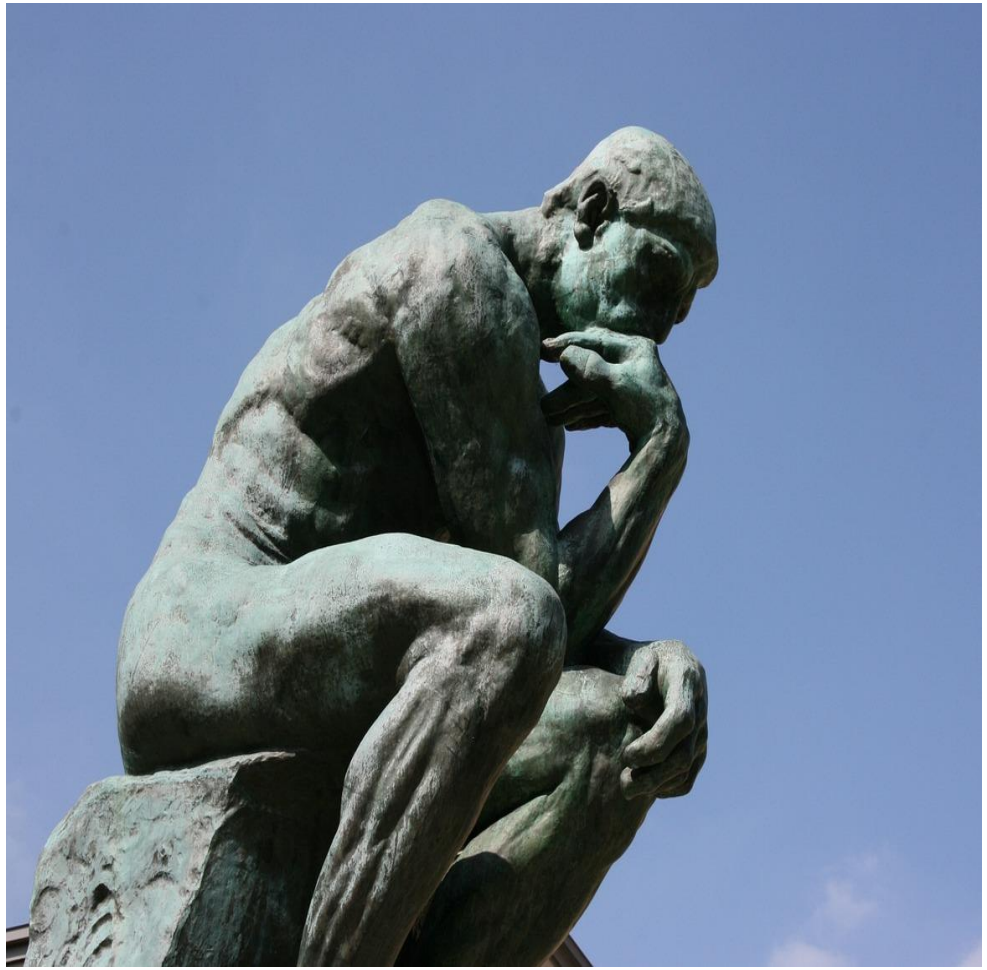
ChatGPT — AI Evolution or Revolution

Stochastic Parrot?

Or

Birth of AGI?



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Key Issues

1. What should CIOs know about generative AI?
2. What are the best practices for deploying generative AI?

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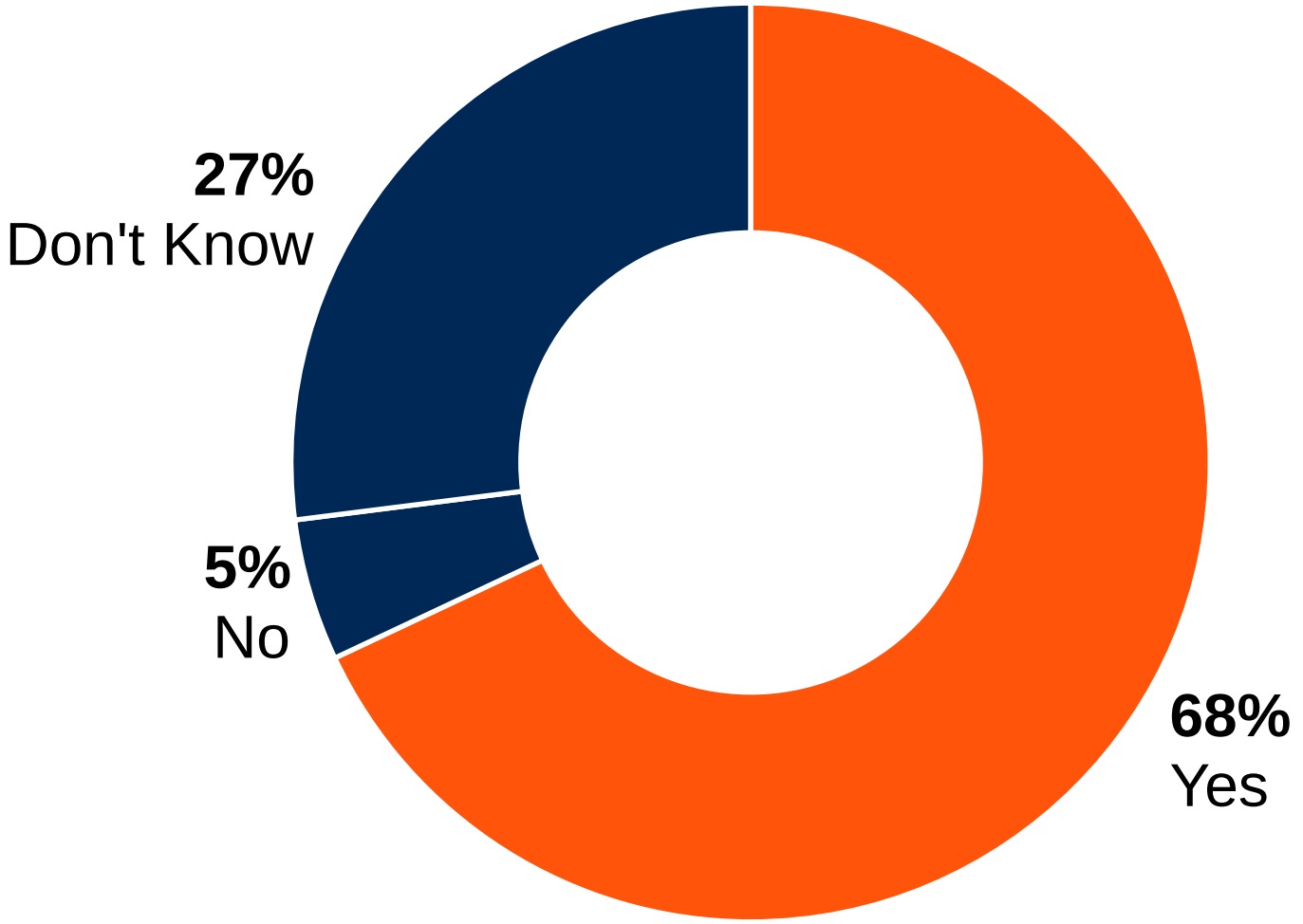
Executive Views on Risks Versus Benefits of Generative AI

Q: Do you believe the benefits of generative AI outweigh its risks?



n = 1,079
Source: Gartner IT Executives Webinar Poll, April 2023

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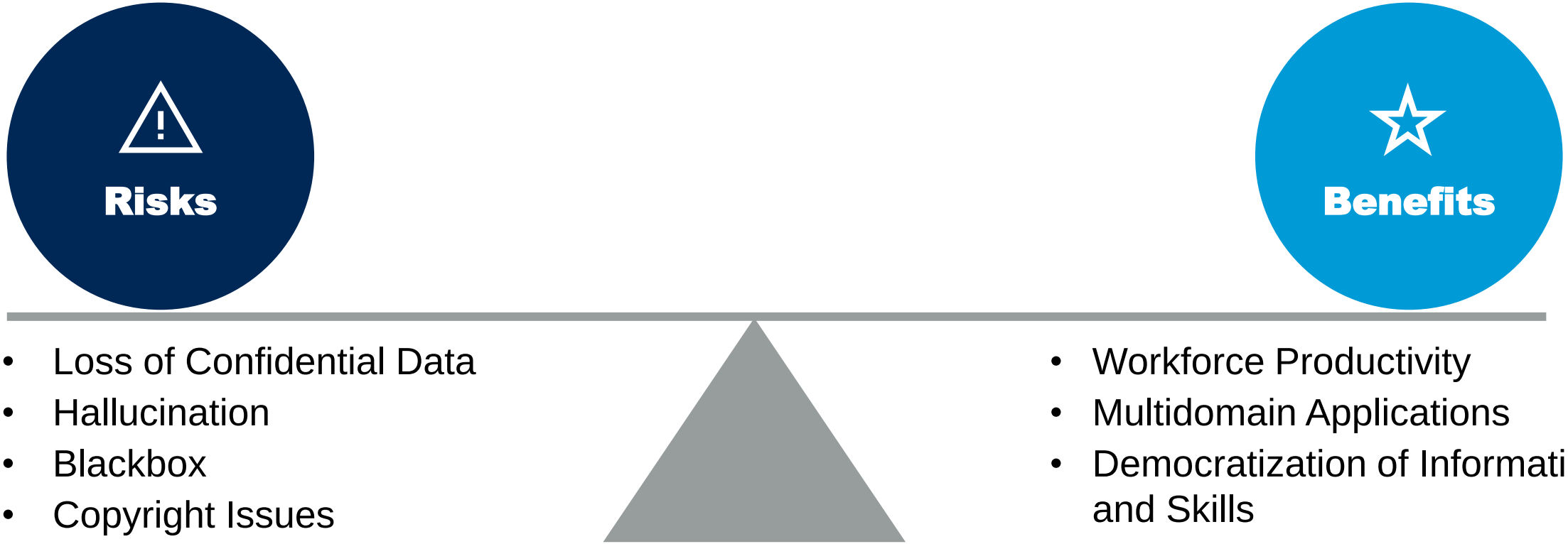
Generative AI — Risks and Benefits



- Loss of Confidential Data
- Hallucination
- Blackbox
- Copyright Issues
- Potential for Misuse

- Workforce Productivity
- Multidomain Applications
- Democratization of Information and Skills
- Innovative Ecosystem

The Challenges Are Nontrivial for Enterprise Deployments.

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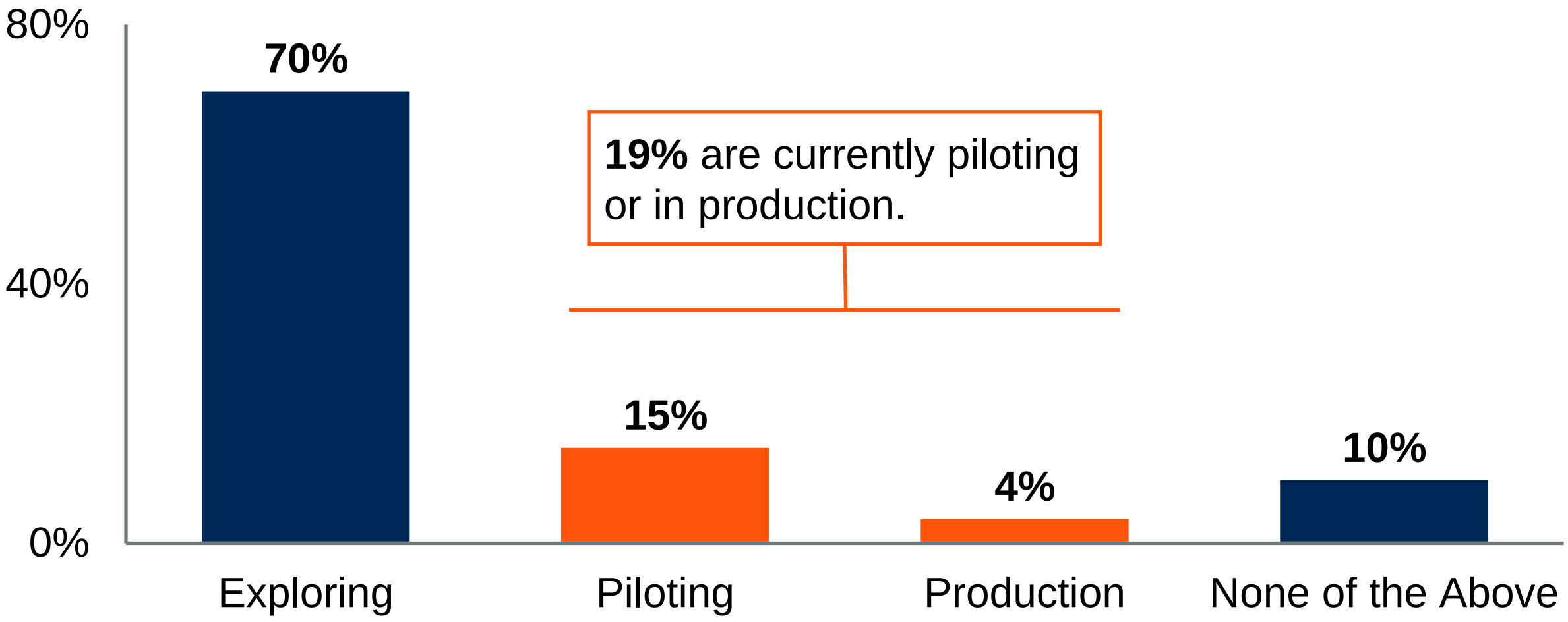
Generative AI Adoption



n = 2,554; Gartner IT Executives Webinar Poll, April 2023

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Use Cases for Generative AI

NLP	Text Generation, Q&A, Summarization, Search, Classification, Intent Recognition, Translation, Rewrite, Speech to Text
Computer Vision	Text to Image, Image Classification, Object Detection, Video Classification, Image to Text
Software Engineering	Code Completion, Code Analysis, Search, DevOps Automation, Documentation
General Sciences and Others	Drug Discovery, Genomic Sequencing, Chemical Formulation Human-Robot Interaction

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Key Issue Take-Away:

Generative AI will reset our lives in a profound way. It represents the next phase of artificial intelligence — unleashing of machine creativity.

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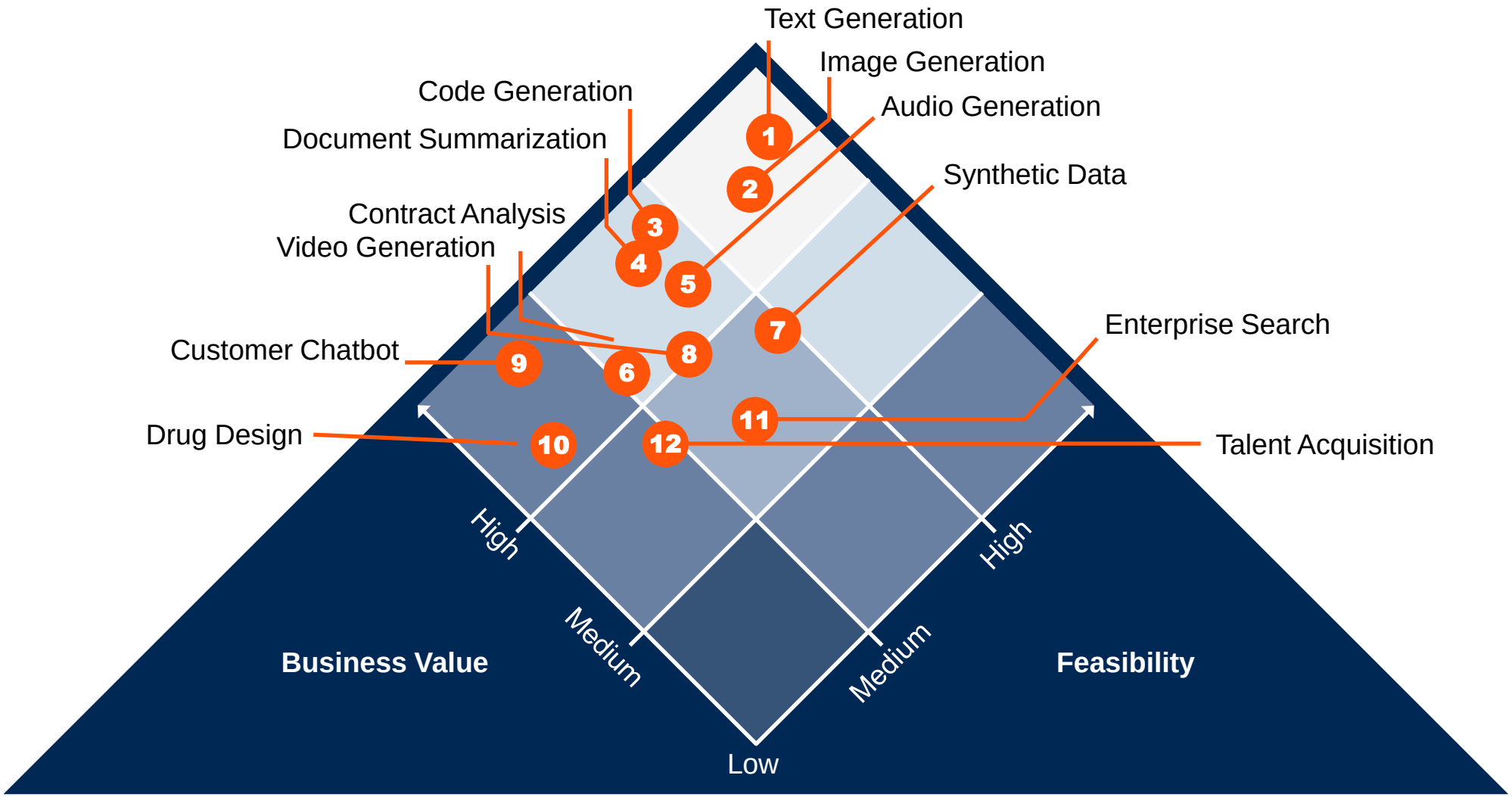
Step 1 — Prioritize Use Cases for Generative AI



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Step 2 — Assign Ownership and Identify Metrics

Create a Tech Tiger Team to Work With Project Owners

Business Goal	Sample Use Case	Project Owner	Metrics
Improved Customer Satisfaction	Customer Service Automation via Chatbot, Sentiment Analysis	CCO	Customer Satisfaction Index/NPS; Time to Resolution for Client Queries
Workforce Productivity	Code Generation, Content Creation	VP of Software Engineering, CMO, CIO	Time Spent on Value-Added Tasks; Employee Satisfaction Scores
Reduce Costs	Contract Analysis	CFO	Decrease in Dollar/Vendor
Revenue Growth	Biz Communications Automation	CRO	Revenue Growth From New Product Lines; ARPU

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Step 3 — Analyze Pros/Cons of GenAI Approaches

Generative AI Development Approaches

Provider Managed Self-Managed

Consume Generative AI Embedded in Apps	**Embed** Generative AI APIs in a Custom App Frame	**Extend** Generative AI Models via Data Retrieval	**Extend** Generative AI Models via Fine-Tuning	**Build** Custom Models From Scratch
Application	Application	Application	Application	Application
Data Retrieval and Prompt Engineering	Data Retrieval and Prompt Engineering	Data Retrieval and Prompt Engineering	Data Retrieval and Prompt Engineering	Data Retrieval and Prompt Engineering
Fine-Tuning	Fine-Tuning	Fine-Tuning	Fine-Tuning	Fine-Tuning
Foundation Model	Foundation Model	Foundation Model	Foundation Model	Foundation Model

Buy → **Build**

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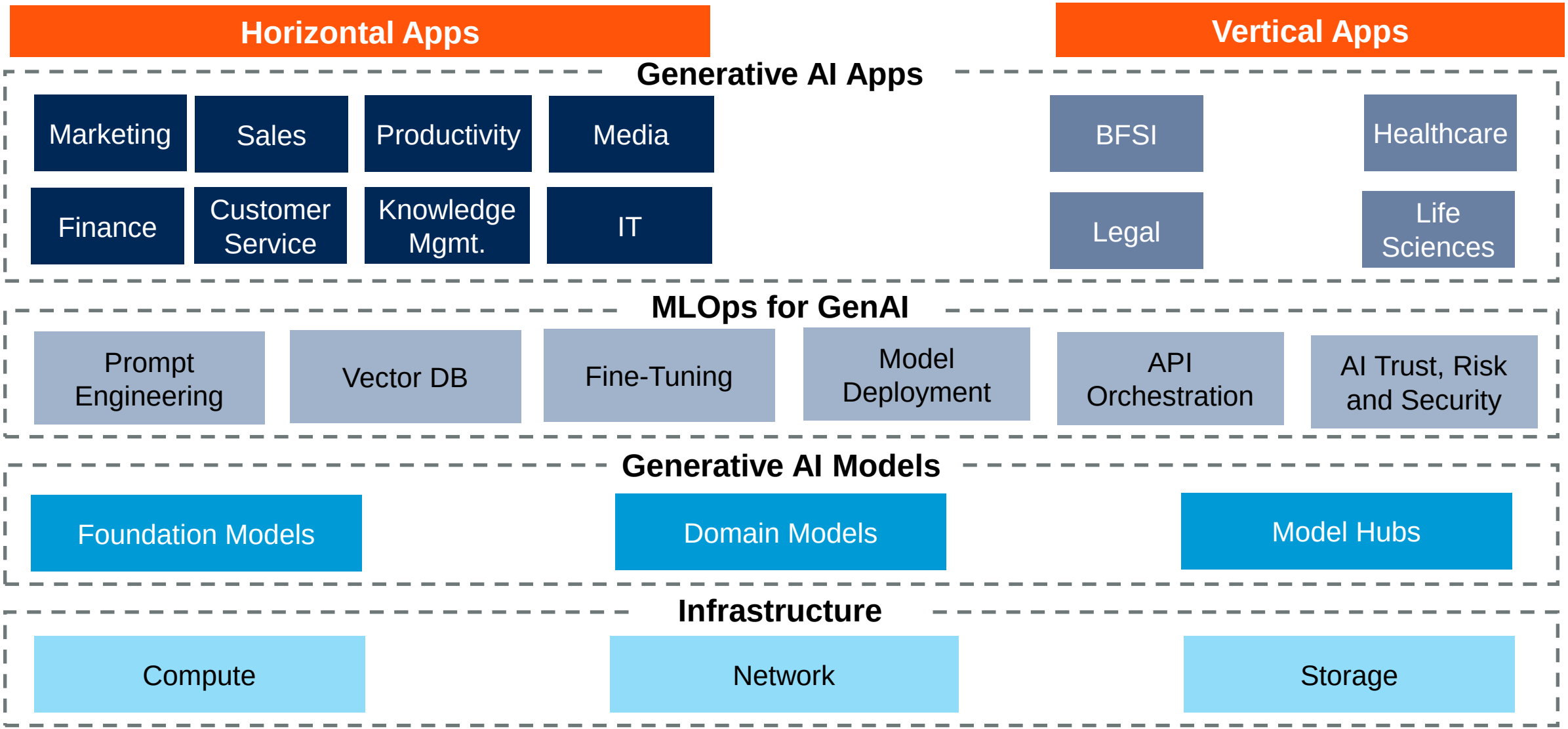
Step 4 — Adopt a Platform Approach to GenAI



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Step 5 — Mitigate Risks With These Actions

Risks	Mitigation Steps
Loss of Intellectual Property	Use enterprise model APIs; prompt governance is key; review third-party service agreements.
Hallucinations	Ground the models via RAG or fine-tuning; tools and humans to vet output.
Security	Implement strong data protection and guardrails for prompt injection attacks.
Explainability	Deploy solutions for explainability; prioritize data referability.
Fairness	Use content moderation and bias detection tools; educate business and IT leaders.
Misuse	Enforce strict access control and approval process; deploy observability tools.
Workforce Impact	Embark on skills retraining, map career paths and provide emotional assistance.

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Step 6 — Standardize and Execute

Create a Sandbox Environment

- Safe Experimentation
- Self-Service

Institutionalize Experimentation

- Conduct Hackathons, Gamify Product Creation
- Filter Best Ideas to Fund

Iterate and Innovate

- Fail Fast, Capture Lessons Learnt and Iterate
- Stay Abreast of Market Innovations

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Best Practices for Deploying GenAI

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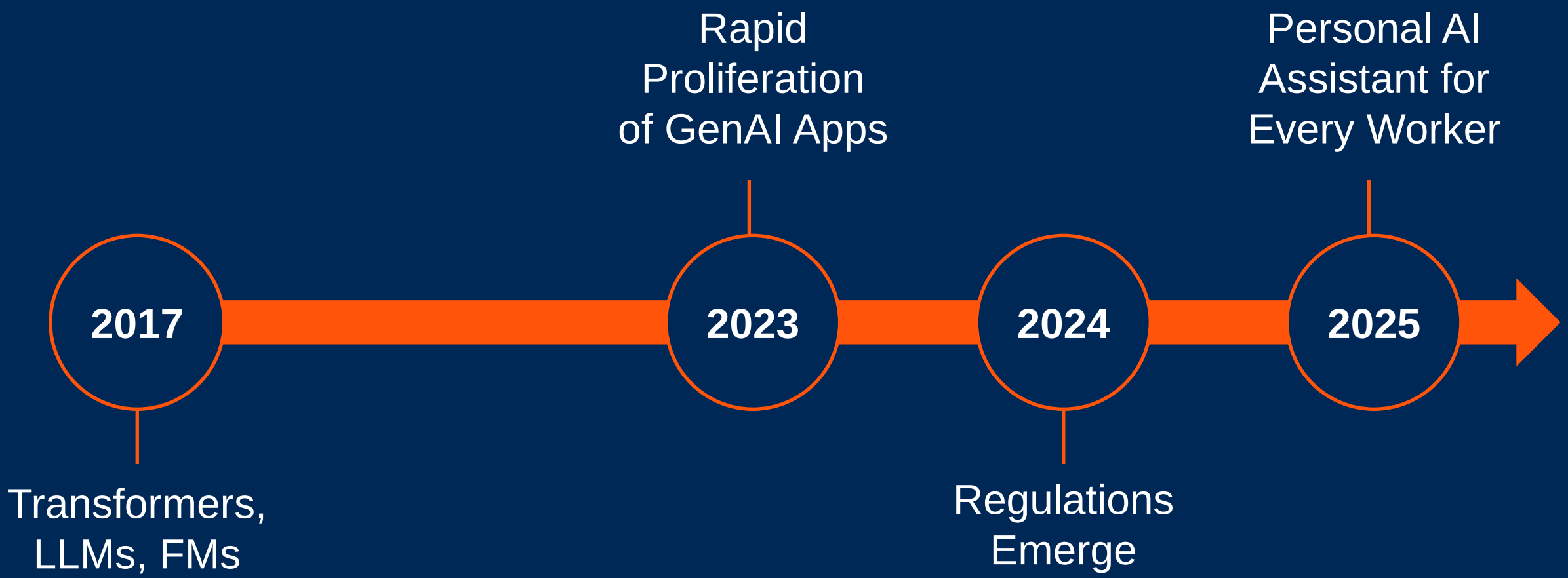
Future of Generative AI



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Recommendations

- Create a position paper for your company that outlines the benefits, risks, opportunities and deployment roadmap for generative AI.
- Instill responsible AI practices to promote ethical and safe usage.
- Facilitate seamless machine-human interaction through UX redesign, feedback loop and education on prompt engineering.
- Designate an incubation team to monitor industry developments, communicate the art of possible, run pilots with BUs and share valuable lessons learnt companywide.
- Prepare employees for this upheaval through skills retraining, career mapping and emotional support resources.

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Recommended Gartner Research

- **Innovation Insight for Generative AI**
  Brian Burke, Arun Chandrasekaran and Svetlana Sicular
- **Board Brief on Generative AI**
  Tina Nunno, Jon Aronoff, Van Baker, and Avivah Litan
- **Innovation Insight for Artificial Intelligence Foundation Models**
  Arun Chandrasekaran, Magnus Revang and Arnold Gao
- **How to Pilot Generative AI**
  Leinar Ramos, Anthony Mullen, Rajesh Kandaswamy and Others
- **How to Choose an Approach for Deploying Generative AI**
  Arun Chandrasekaran, Leinar Ramos and Rajesh Kandaswamy

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