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Leveraging the Full Potential of Artificial Intelligence

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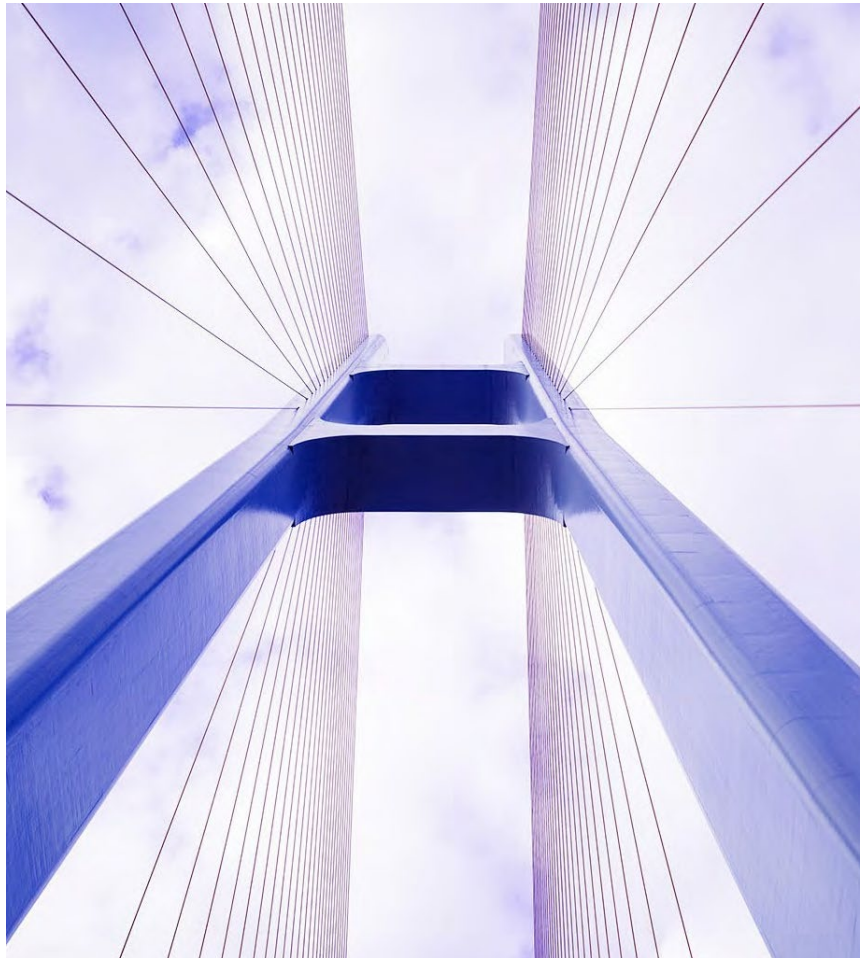
Agenda



1. The “Why” – GenAI today
2. The “What” – Defining GenAI
3. The “Where” – Opportunities in Finance
4. The “How” – Kickstarting GenAI
5. The “When” – A Typical Timeline
6. The “Who” – Finance Leaders & Professionals
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1. The “Why”: GenAI Today

Typical Challenges today

How would you like the following?

Daily forecast of your budget versus actuals, summarized by various categories & dashboards

Automated narrative reporting and analytics from various systems for your ACFRs

Digitized reconciliations and have a set of journal entries drafted for your review at month & year end

Predictive insights on grants, expenditures, funds, and project statuses

Standardized ***data extractions for your audits***

Periodic controls ***analysis of your security & controls***

Thorough ***analysis on your contract compliance***, minority business commitments, and other KPIs

Mechanism to ***update your documentation, policies, and procedures*** against latest GASB standards

Obtain ***insights on GASB standards & implementations***

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Challenges Govt. Finance Professionals face today

Legacy Tools and manual activities for forecasting & budgeting

Reliance on **standard system reporting for audit** discovery and testing

Developing financial reporting & narratives leveraging your ERPs and other financial solutions

Non-automated controls analysis for security & controls

Performing **manual/semi-automated reconciliations**

Reliance on **manual reviews of various contracts** for compliance, values, complexity, among others

Lack of strategic & predictive insights on large voluminous projects, expenditures, grants, and funds

Labor intensive training & documentation activities for keeping up with systems, policies, procedures, and accounting & financial standards

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2. The “What”: GenAI?

Defining GenAI

The Finance Landscape is changing

Evolving systems of record, systems of engagement, and systems of intelligence

Historically

Human-driven processes

The internet > smartphones	Shared services and functional silos	On-premises, monolithic ERPs	Everyone is an accountant
Windows suite > everything in Excel	Control focus versus value transformation	Manual, historical focused reporting	

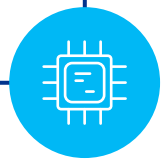
Today

Automation, insights, and analytics

There's an 'app' for everything	Global, integrated business services	Strategic partners & data scientists	Global end to end process management
Cloud everywhere, increased collaboration	RPA considered basic, expansion of AI	Automated reporting, data informed insights	

Future

Digitally enabled insight



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Art of the possible

Expectations of Finance are changing in order to stay relevant

From…	To…		To…	
Limited, rules-based process automation		**Enable new technology** Cloud everywhere, AI enabled processes		**Automate everything** Continuous cycles and insights
Disparate data sets, reactionary analysis		**Manage and monetize data** Data as an asset		**Serve as strategist** AI generated insights and commentary
Task-focused workforce, limited digital acumen		**Flexible on-demand workforce** Finance as a service		**Lead enterprise performance** Right skills to drive innovation
Large, global business services centers		**Boundary-less delivery** Virtual centers of excellence and 70 percent less “transactional" labor		**Everything as a service** Quickly adapt to changing customer needs

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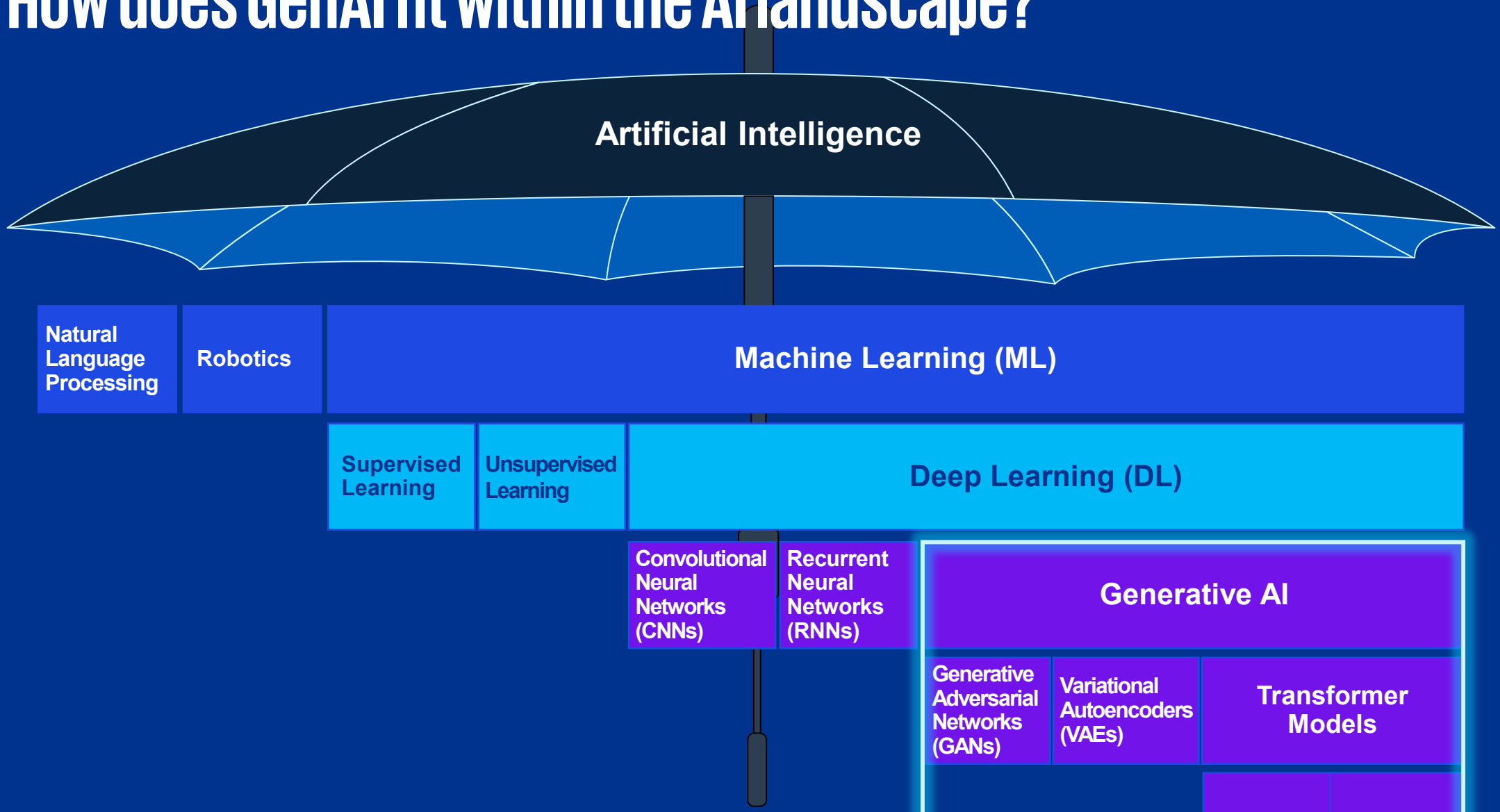
How many of you all have used ChatGPT or Co-pilot?

How does GenAI fit within the AI landscape?



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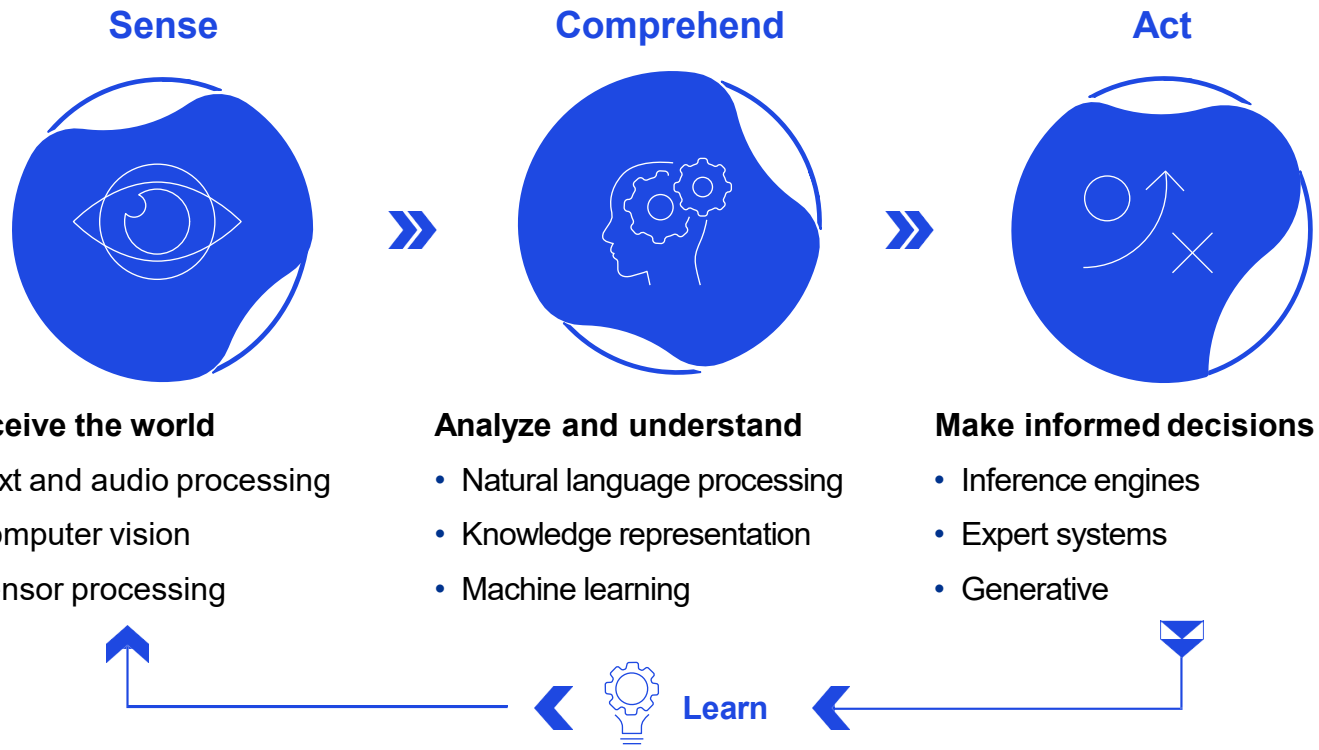
What is Generative AI? How's it different from traditional AI

GenAI is a combination of systems, tools and methodologies enabling machines to sense, comprehend, act, and learn on their own or with minimal human augmentation.



Generative AI

is a branch of deep learning that involves unsupervised and semi-supervised algorithms to generate new content and data faster than ever before.

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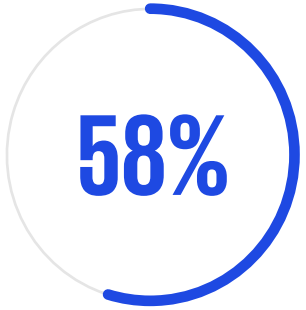
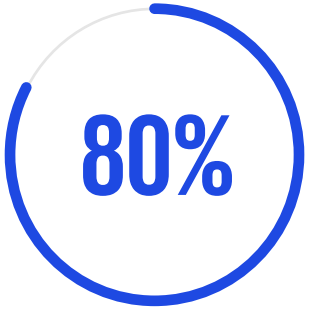
Generative AI is rapidly moving from market buzz to business value

…return on investments in AI within 14 months of deployment (for every $1 invested $3.5 in return)

…of people believe that the benefits of Gen AI outweigh the risks (33% by a great deal)



…of people feel that Gen AI impacts them at work today and 77% believe significantly in 2 years



… of workers in the U.S. economy have an occupation where >10% of tasks will be exposed to Gen AI

Source: KPMG 2023 AI in Financial Services Reporting Survey; KPMG Generative AI Consumer trust Report, Jan 2024; IDC Business Value of AI Survey, Sept 2003; KPMG 2023 U.S. Technology Report

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Generative AI will have the biggest impact on knowledge workers

Generative AI Impacts

Generative AI impacts will fall primarily on knowledge workers, mostly through augmentation[1]

- Industry estimates that 2/3 of U.S. occupations are partially exposed to AI
- For most jobs only partial share of workloads can be replaced (25-50%)
- Impacts will flow up to fiscal functions based on relative share of affected occupations

Source: Goldman Sachs Economics Research – "The Potentially Large Effects of Artificial Intelligence on Economic Growth (Briggs/Kodnani)" March 2023

Core Generative AI Capabilities Impacting Knowledge Workers

Create

Generate text or multi-media content for intermediate or final use.

ROI **Competition**

Disruption

Increased speed and quality of creative processes, from writing policies to code

Analyze

Analyze or explain structured or unstructured information.

Growth **Profitability**

Democratized data access and analytical tools, increasing decision speed and quality

Search

Locate desired information within pre-trained knowledge or external sources.

Growth **Competition**

Enable faster and deeper access to knowledge bases, insights and standard operating procedures

Interact

Simplify software use through text-based interactions and improve cross-application compatibility.

ROI **Competition**

Growth **Disruption**

Improved software integration to automate crucial processes and shift work towards higher value tasks

(1) Source(s) *Occupational, industry, and geographic exposure to artificial intelligence: A novel dataset and its potential uses*, Felton et al. (2021) and *How will Language Modelers like ChatGPT Affect Occupations and Industries?*, Felton et al. (2023)

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The portfolio of GenAI Technologies is expanding and evolving

Phase 1 – Stand-alone

GenAI functionality embedded into enterprise workflows

- Tailored applications of GenAI to automate or augment company specific use-cases
- Includes AI Agents and “Small LLMs”
- Leverages domain specific data – structured & unstructured databases

OpenAI

Google AI

DALL·E

Stable Diffusion

Phase 2 – Software Integrated

GenAI functionality embedded into enterprise workflows

- Tailored applications of GenAI to automate or augment company specific use-cases
- Includes AI Agents and “Small LLMs”
- Leverages domain specific data – structured & unstructured databases

Microsoft 365 Copilot

salesforce einstein

servicenow

workday.

WRITER

rhino.ai

AUDITORIA

Phase 3 – Workflow Integrated

GenAI functionality embedded into enterprise workflows

- Tailored applications of GenAI to automate or augment company specific use-cases
- Includes AI Agents and “Small LLMs”
- Leverages domain specific data – structured & unstructured databases

Amazon Bedrock

Pinecone

Koala AI

ANTHROP\C

Significance of responsible AI
Formalized Co-innovation partners
Differentiated value thru enterprise data

Growing impact and complexity

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3. The “Where”: Opportunities in Govt. Finance

How is the landscape changing?

Seamless integration of technology, data and people is more important than ever

Modern digital enablers

Environment	Information	Automation	Interaction	Intelligence
Multi-cloud networks, platforms and security	Ingestion, normalization and Integration	Digital process enablement and optimization	Harmonized human-centered experience	Visualization, prediction, and speed to action
Cloud ERP & EPM	External Data	Process mining	Chatbots	Anomaly detection
cybersecurity	Governance	Workflow	APIs	AI enabled forecasts

People

Data literacy | Digital fluency | Impactful communication | Ways of working | Experiences | Value proposition

Talent management strategies

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Where are Finance teams starting with GenAI adoption?

Finance's role as a business partner has put them an ideal position to lead enterprise adoption

Generating commentary

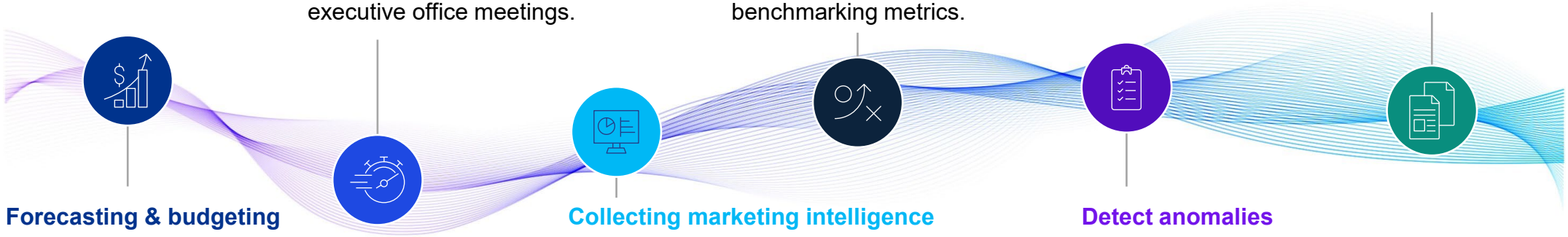
Reduce the time and effort needed to create recurring materials required for financial reporting, business reviews, management reports, and executive office meetings.

Generating strategic insights

Partner with other functions to provide insights across the business. Use finance's position to inform strategic decisions and solve problems with pricing, performance, and benchmarking metrics.

Managing contracts

Generative AI tools can draft contracts with preferred term and prioritize contract reviews based on deviations from standard terms and conditions.



Forecasting & budgeting

Integrating predictive models, creating scenarios, and generating insights on potential financial outcomes.

Collecting marketing intelligence

Powerful research tool able to find and synthesize public data to generate insights on industry trends.

Detect anomalies

Generative AI shows promise as a tool for detecting errors and potential fraud. It can compare new data with past patterns to identify anomalies.

GenAI is a natural extension to CFO's responsibilities related to strategy, enabling technologies and risk management

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What are the some other opportunities for GenAI in Finance?

Intelligent monitoring, continuous processing, actionable business intelligence

Primary Categories in Finance

Intelligent Monitoring	Intelligent Processing	Intelligent Forecasting	Prescriptive Insights (GenAI Driven)
Applied Anomaly Detection	*Language Modeling*	*Predictive Modeling*	*Generative Creation*
Primary applications in Transact to Report processes (R2R, P2R, S2P, and L2C)	*Primary applications in Grant to Cash, Source to Pay, Risk & Compliance*	*Primary applications across Integrated Budget Planning and continuous monitoring*	*Highly valuable but more experimental, more custom, and less repeatable*

Examples

G/L analysis Data anomaly detection Expense fraud Vendor risk	Grant Usage Cognitive contract mgmt. Regulatory compliance	Budget vs. Actuals monitoring Agency/Division spend management and monitoring	Operations Reviews Contract Optimization & Compliance Trends & Performance

Benefits

>90% automation of transaction processes	**2-10x** faster financial close & planning cycles	**10x** more time spent on analytics, decision support and innovation	**80%** more accurate forecasts	**98%** confidence in finance statement audit compliance

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How can Govts. apply GenAI to their finance functions?

Financial Planning & Decision Support

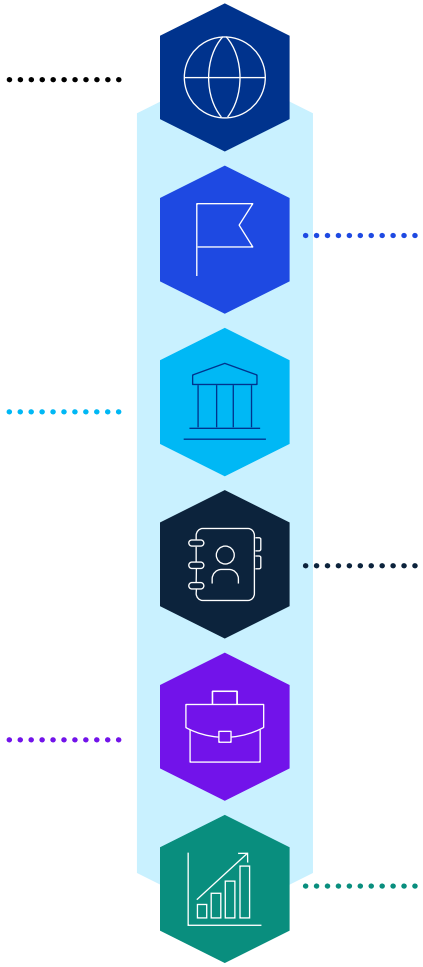
- Streamline creation of recurring materials for financial close, operations & business reviews
- Integrate financial non-financial data into standard templates and generate preliminary insights into gaps, trends, potential risks and opportunities

Optimize Grants Mgmt. & Reporting Cycle

- Use large language models to analyze large datasets related to Grants processes
- Identify patterns and trends, providing valuable insights that can be used to optimize financial operations
- Analyze ageing of funds, delinquency, drive efforts for certain initiatives

Contract Generation & Review

- Identify contracts with clauses relevant to Grants and Procurement management and document accounting treatment needs
- Prioritize review of contracts based on deviation from standard T&Cs
- Generate contracts automatically with preferred terms



Benchmarking & Peer Analysis

- Combine cognitive search capabilities and GenAI to extract valuable insights from publicly available information based on agreed parameters
- Synthesize insights and points of interest to personas defined by the initiator
- Integrate peer benchmarking and generation of initial hypotheses to close identified gaps

Stay Up To Date

- Generative AI can ingest new pronouncements in the GAAP, GASB, etc. spaces and summarize key points for teams
- Provides analysis on new guidance with implementation ideas

Invoice Reconciliation

- Verify compliance with payment terms from contracts
- Support automatic reconciliation of invoices with automatic data extraction and entry of detailed line item information

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Govt. Specific Considerations

Trust

- Error rate of generative AI models is a challenge to be considered given the impact models may have on specific use cases

Compliance

- Govt. is a heavily regulated industry with unique requirements (Federal, HIPAA, CMS, FHWA, State, etc.)

Security & Privacy

- Organizations have responsibility to protect sensitive information
- Significant guardrails should be put in place to restrict access to sensitive information (i.e., data anonymization)

System Integration

- Generative AI applications will need to be integrated effectively with current financial systems, Grants management, HR, Payroll, Time & Attendance systems

Workforce Expertise

- Organizations lack the expertise within their workforce to effectively develop and maintain AI systems

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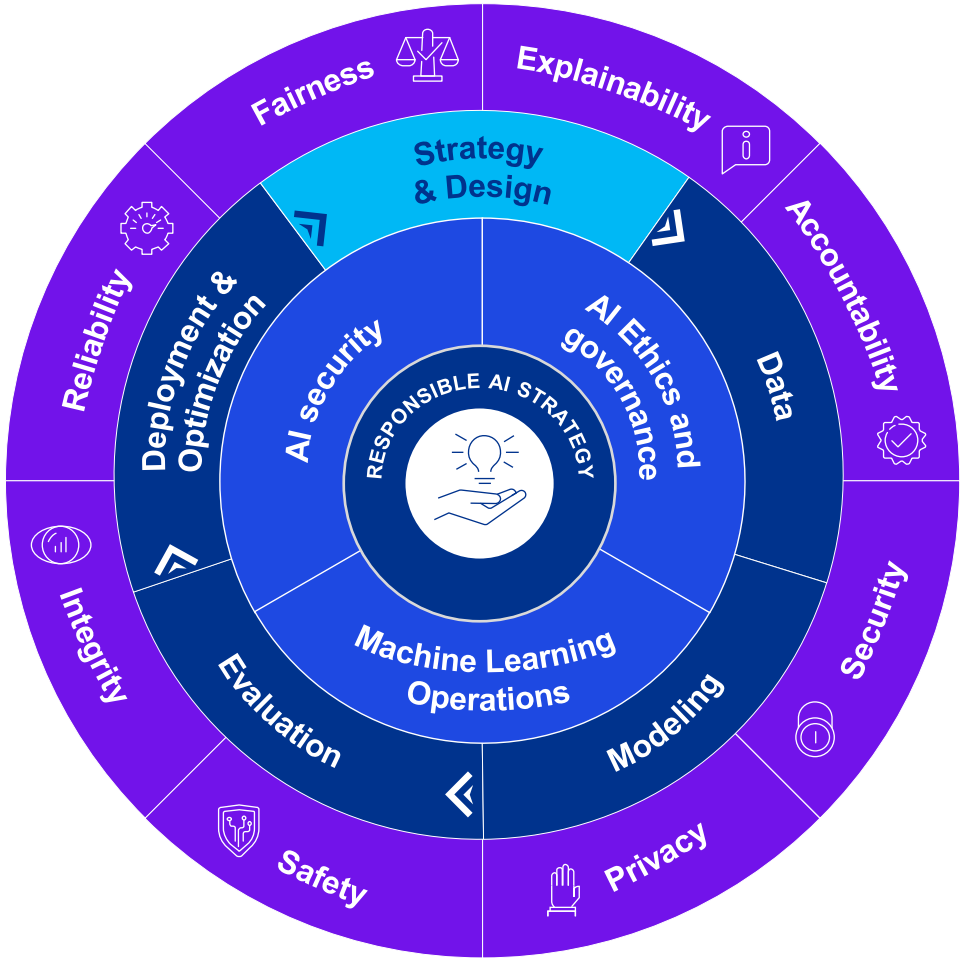
Responsible AI is Critical

We understand responsible AI is a complex business, regulatory, and technical challenge, and governments need help to put it into practice

Develop, and deploy an end-to-end Responsible AI program across the AI/ML lifecycle



Fairness
Ensure models are free from bias and equitable.

Explainability
Ensure AI can be understood, documented, and open for review.

Accountability
Ensure mechanisms are in place to drive responsibility across the lifecycle.

Security
Safeguard against unauthorized access, corruption, or attacks.

Privacy
Ensure compliance with data privacy regulations and consumer data usage.

Safety
Ensure AI does not negatively impact humans, property, and environment.

Data integrity
Ensure data quality, governance, and enrichment steps embed trust.

Reliability
Ensure AI systems perform at the desired level of precision and consistency.

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4. The “How”: Kickstarting GenAI

How do you start?

How are you going to go about this journey?

01 Align on specific use case(s)

Define desired outcomes of the pilot and prioritize specific area(s) of focus

02 Gather relevant data

Identify relevant data sources and validate the data is accurate, complete and up-to-date

03 Train the model

Train the AI model(s) to understand the data, perform the desired analysis and tasks

04 Test and refine

Test performance and refine algorithms by comparing outputs to those of humans or existing models

05 Integrate, monitor and scale

Integrate into workflows via APIs, monitor performance, and evaluate opportunities to scale

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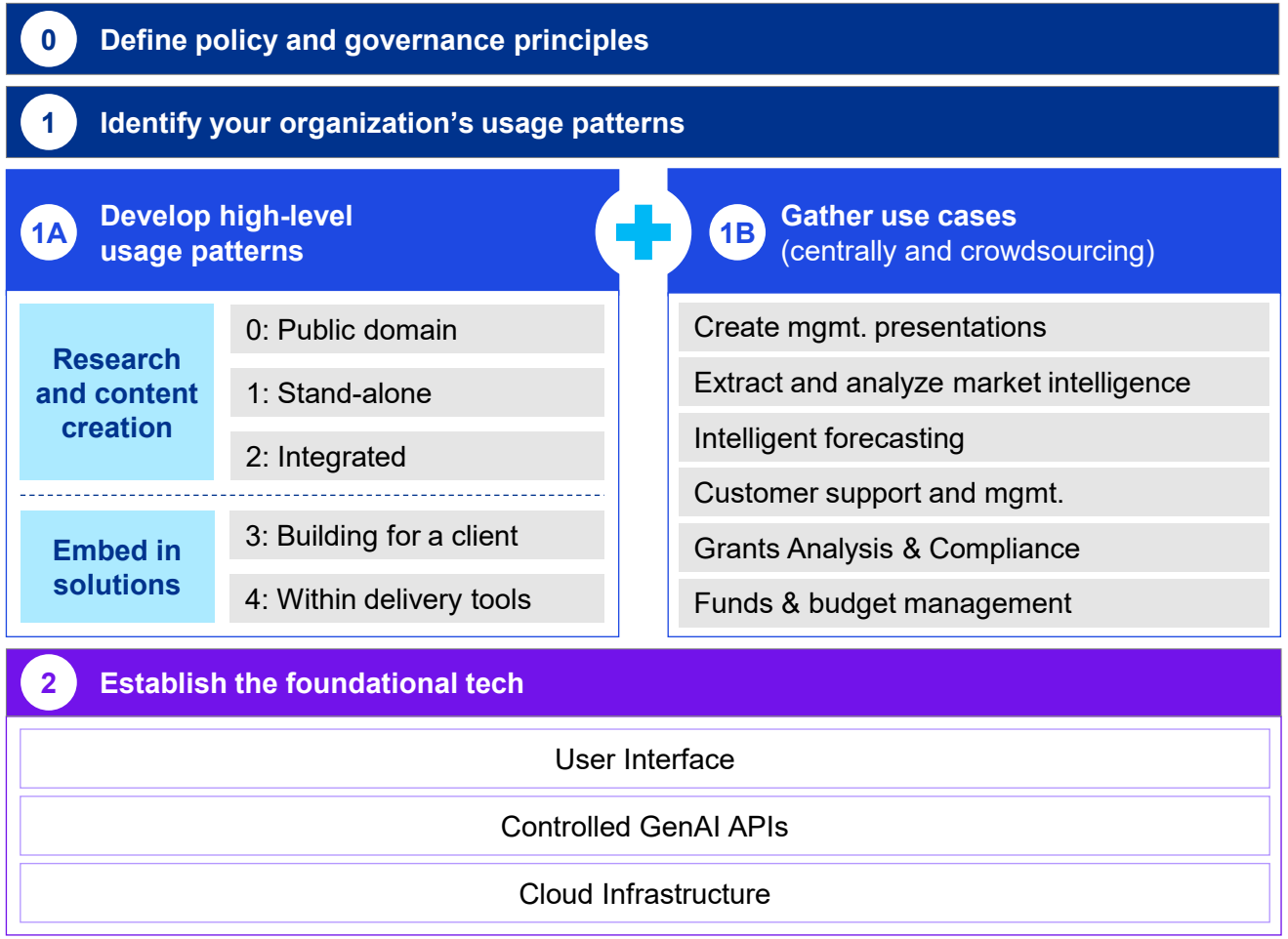
How to get started on the generative AI journey

- Set up a **generative AI tiger** team with a single, empowered rep from key functions (e.g., Finance, IT, Risk, Legal, Cyber Security) to define and publish acceptance-use policies, governance mechanisms, and general awareness information
- Think about usage:
  - First focus on high-level **usage patterns** to drive quick experimentation
  - In tandem, develop use-cases both centrally and through **crowdsourcing:**
    - Ideally small ideas that have an outsized impact
    - "How do I do take a task that 500 employees do 100x a month and make it 50 percent faster?"
  - Deploy a **lab-based model;** roll out MVP use cases quickly and expand those that gain traction
- Analyze **current systems that have AI** capabilities, leverage regulations, and **appropriate budgets**
- Make sure your infrastructure is ready; **investments in cloud** now will pay dividends
- Kick-off requirements gathering for **foundational technical components** (e.g., secured cloud, UI, API)



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Key takeaways

Learnings from various client initiatives, including KPMG Ignite Platform experience

01

Path to adoption can be different based on business need

- Choices are many – ranging from general purpose solutions like copilots through purpose-built LLMs.
- Start with business problems so that a suitable GenAI solution can be found – not the other way around.

02

Generative AI is an Ecosystem Play

- While a standalone pilot is possible, enabling a support ecosystem is essential for maximizing the value and success.
- Experimentation with peers, partners, and startups might prove to be cost effective.

03

Responsibility-first approach is mandatory

- Addressing the trust gap with Generative AI
- Risks, IP, Licensing etc.
- Regulatory response

04

Generative AI requires different treatment from the traditional AI practices

- Volume of data, compute, integration and orchestration is substantially higher than traditional AI.
- Adopting an appropriate operating model is critical for persistent success.

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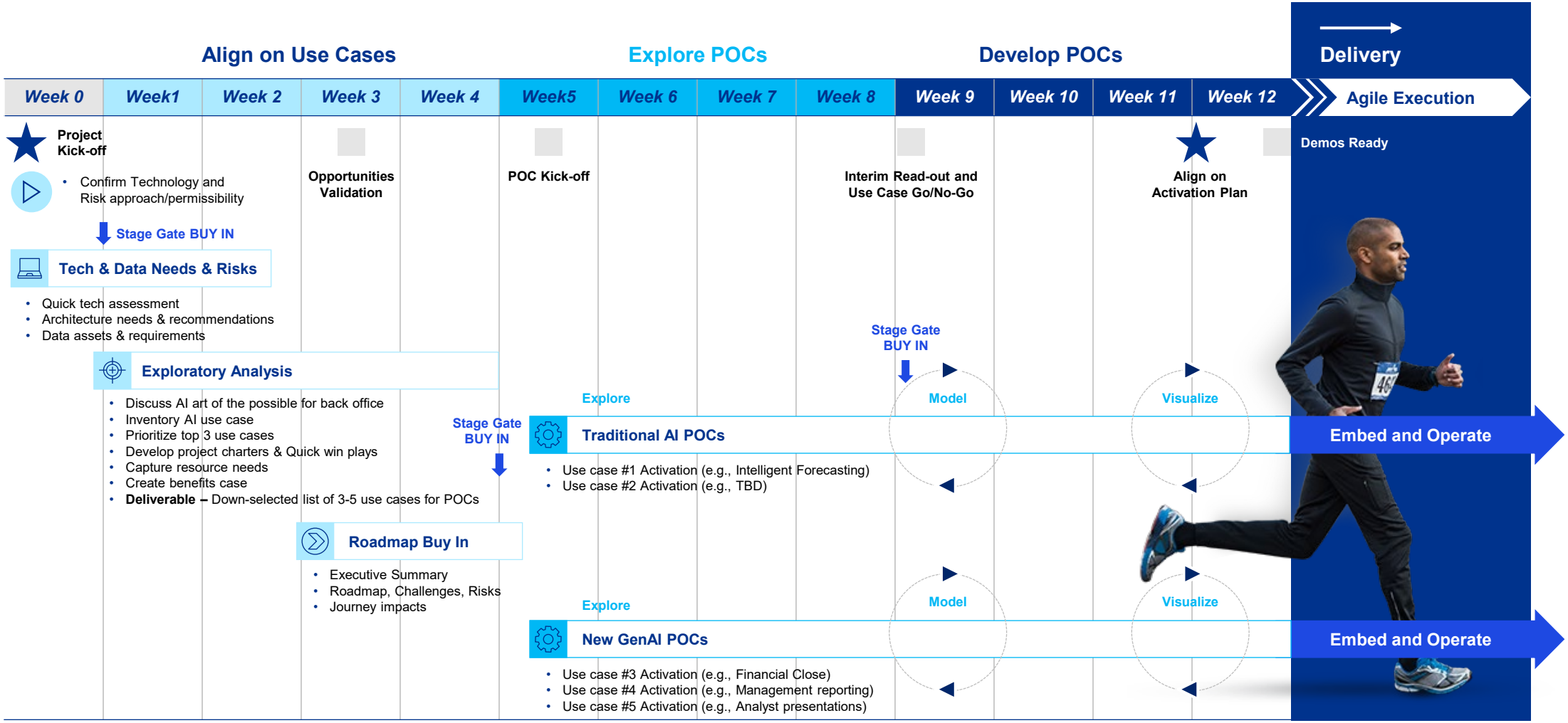
5. The “When”: Typical timeline?

Illustrative Delivery Timeline



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6. The “Who”: Finance Leaders & Professionals

Why should Finance lead GenAI adoption?

GenAI is a natural extension to Finance's existing responsibilities related to strategy, digital transformation, and risk management

Role of Finance	**Evaluate impact** on enterprise strategy, business, operations and workforce	**Lead refresh of strategy and targets**, considering opportunities, risks, and tradeoffs	Lead **more agile**, effective allocation of enterprise investments	**Facilitate development of best practices** for governance, alliances, and usage	Scale adoption within Finance to **preserve and create enterprise value**
Questions Finance Leaders must answer…	• How can we leverage to our ***advantage***? • Where should we ***prioritize*** across enterprise and within ***Finance***?	• What is the ***impact*** on our ***grants & funding streams***? • What is the impact to ***productivity*** and ***capacity***?	• What ***skills*** and ***capabilities*** do we need? How will we close any ***gaps***? • What is the right ***interaction model*** across the ***State/ Local leadership***, and ***functions***?	• How are should we ***mitigate risks*** – business, operational and financial? • How can we ensure responsible ***development*** and ***deployment*** in line with our values and ethics?	• How can we ***optimize*** return on ***investments***? • How can we enable sustained ***value creation*** vs. immediate ***cost savings***?

GenAI adoption is a survival imperative and CFOs are ideally positioned to lead the charge

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New risks and challenges for Finance Leaders to manage

Costs $ Revenue

What should we acquire or divest to maximize non-organic growth potential?

How much do we need to invest this year and next to make it happen?

What will the additional costs be for all the GenAI subscriptions and usage?

How much cost can we take-out realistically if we fully adopt GenAI across the enterprise?

Will our customers spend more or less on what we deliver after they have adopted AI?

Can we create new services and/or revenue streams enabled by GenAI?

Will our departments take advantage if they adopt GenAI faster?

Do we need to manage funding levels?

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What skills will the new workforce need to succeed in the age of AI?

The workforce of the future will require new skills and competencies to scale AI capabilities

Technical skills

Knowledge and proficiency in data science, deep learning, natural language processing, and other relevant AI technologies.

Analytical skills

Ability to analyze and interpret data using AI-powered tools and platforms to gain insights into customer behavior and preferences.

Creativity and innovation

Capacity to identify and develop new AI-based products and services that meet evolving customer needs and preferences.

Critical thinking

Capacity to evaluate and interpret AI-generated insights and make informed business decisions.

Interpersonal skills

Strong communication skills to collaborate with AI experts and effectively communicate complex information to internal and external stakeholders.

Lifelong learning

A willingness and interest in continually updating skills and knowledge to keep up with rapidly evolving AI technologies.

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7. Next Steps: What to lookout for?

As you start your journey?

GenAI is presenting immediate risks

Generative AI services are still in the earlier stages, with service hardening and better maturation required to use the capabilities more broadly. Below are some illustrative risks for consideration given the current services.

Security	Contracting	Outcomes	Data
Manipulation of input or outcomes	Intellectual Property/ Ownership of Results	Limitations around outcomes	Data privacy and how data is shared with the service
Fraud and Counterfeiting	Rights to audit third party	Lack of transparency into training set	Data logging by the service
Deepfakes	Data rights	Lack of transparency algorithms	Retention of input and output data
Adversarial attacks	Understand service features and roadmap	Limitations on how to fine tune/customize the model	How data is used and whether that data is low/high risk

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Responsible AI Overview and guiding principles

Responsible AI is an approach to design, build and deploy AI systems in a safe, trustworthy and ethical manner so that organizations can accelerate value for its workforce, customers, and suppliers

KPMG has developed eight core principles that guide our approach to Responsible AI across the AI lifecycle:

Responsible AI Guiding Principles

1. Fairness

Ensure models are free from bias and equitable

2. Explainability

Ensure AI can be understood, documented and open for review

3. Accountability

Ensure mechanisms in place to drive responsibility across lifecycle

4. Data Integrity

Ensure data quality, governance and enrichment steps embed trust.

5. Reliability

Ensure AI systems perform at desired level of precision and consistency

6. Security

Safeguard against unauthorized access, corruption or attacks

7. Privacy

Ensure compliance with data privacy regulations and consumer data usage.

8. Safety

Ensure AI does not negatively impact humans, property, environment

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8. Q&A

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