

GenAI Unveiled

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IBM Consulting, India





Welcoming

Gen AI Era

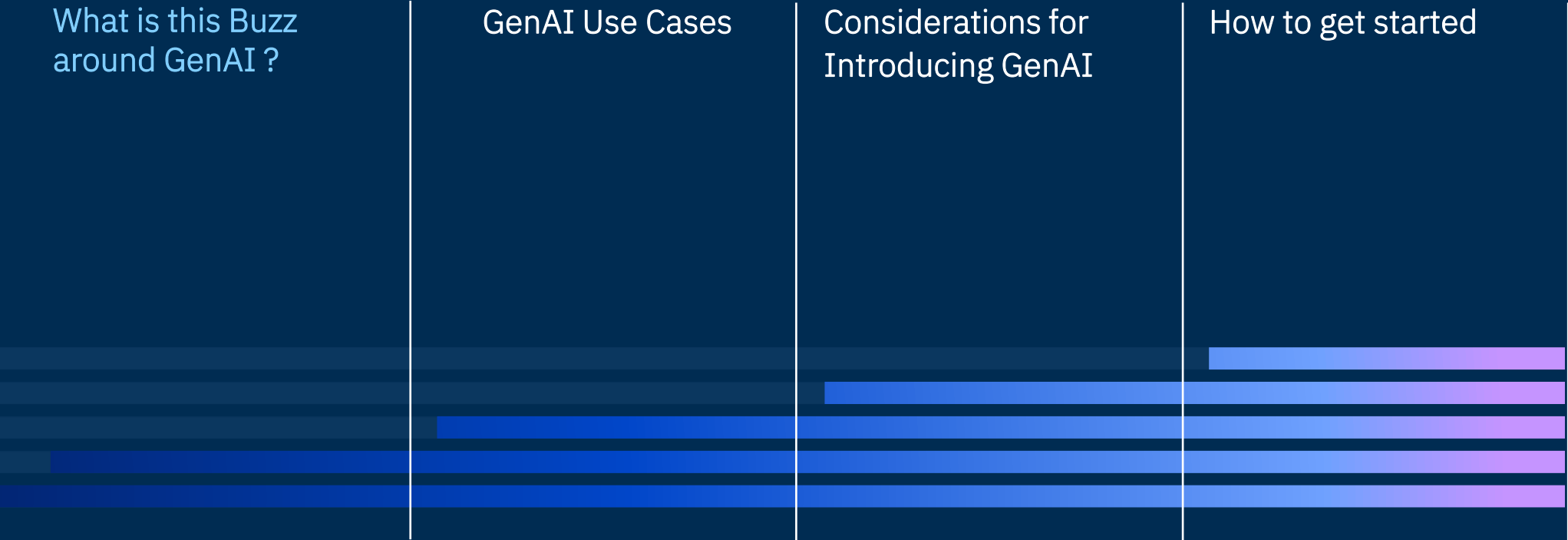
Agenda

What is this Buzz
around GenAI ?

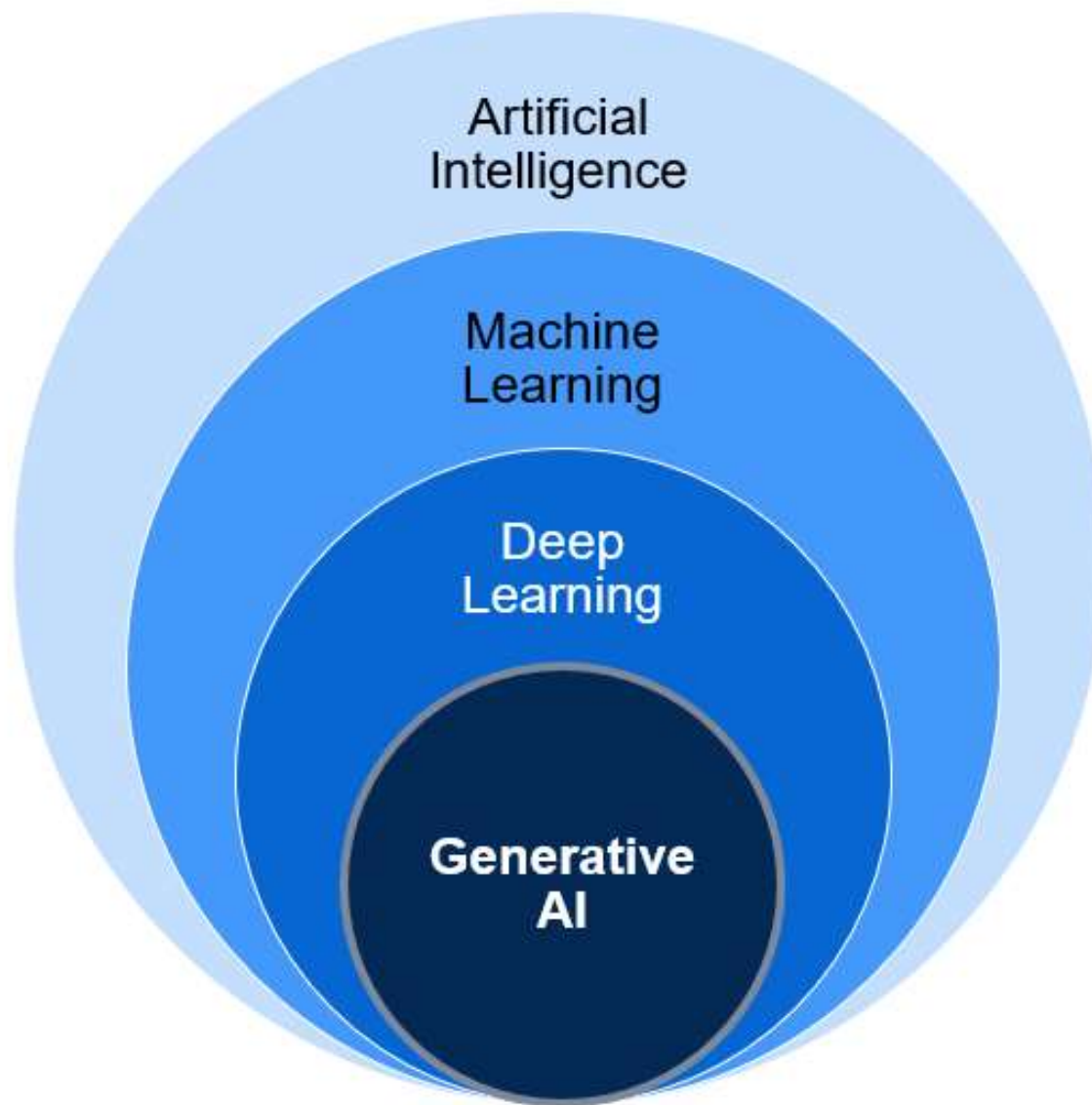
GenAI Use Cases

Considerations for
Introducing GenAI

How to get started



The AI Landscape



Differentiating Traditional AI from Gen AI

Traditional AI

Analytics



e.g. given a housing database of rate per sq.ft and the size of recent listings, highlight the best value homes

Machine learning



e.g. predict the price of a new house listing based on characteristics of the house

Deep learning



e.g. predict the price of a new house listing

Generative AI

Foundation models



e.g. generate a text highlighting the attractiveness of buying a house in Plano, TX

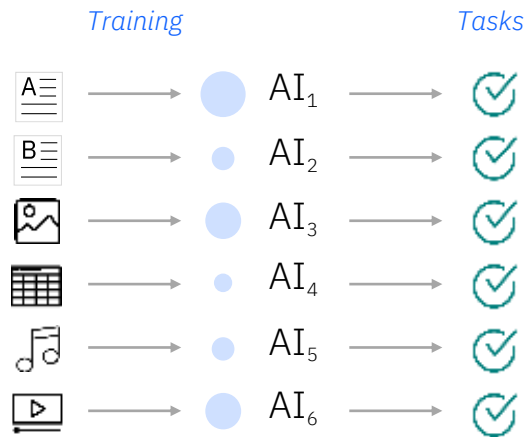
Large language models



eg. you are a realtor. Write the description of a \$2M home in Plano, TX and generate an ad listing – this listing changes based on interested of who is looking at it

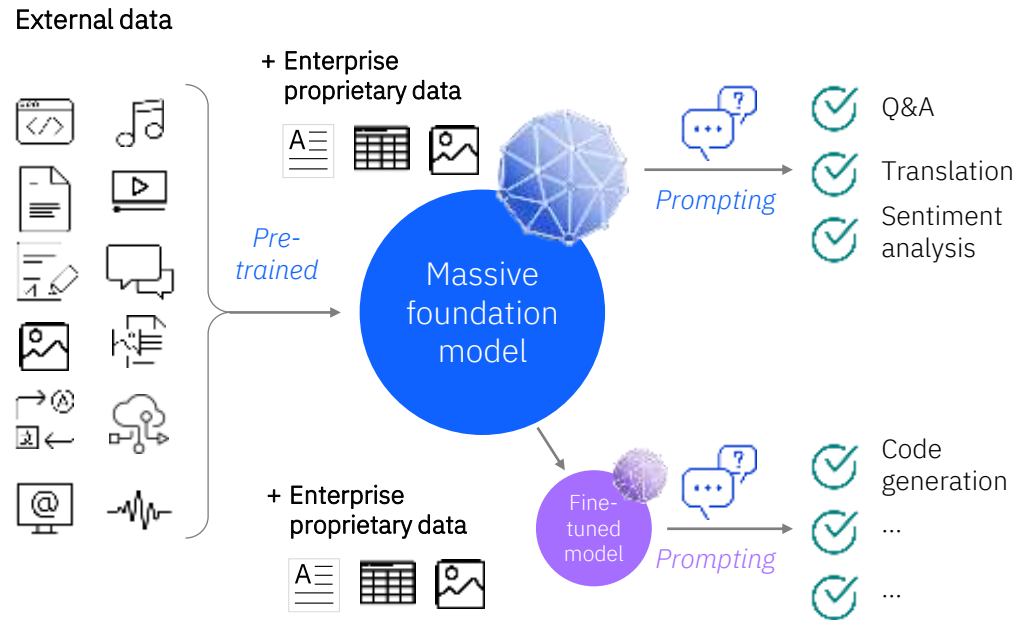
Foundation models, Heart of GenAI, establish a new paradigm for AI capabilities

Traditional AI models



- Individual siloed models
- Require task specific training
- Lots of human supervised training

Foundation models



- Massive multi-tasking model
- Adaptable with minimized training
- Pre-trained unsupervised learning

Enhanced capabilities

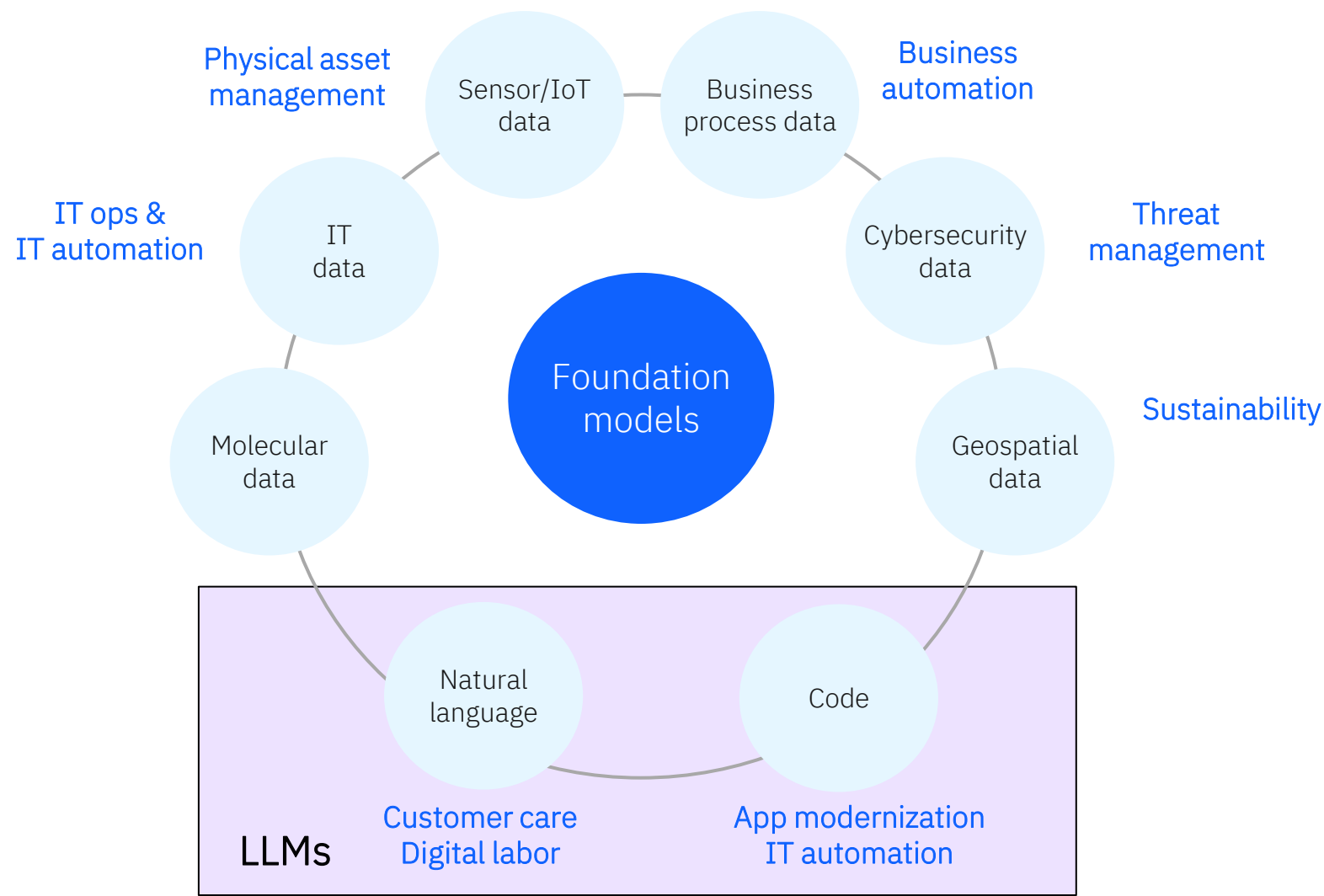
- Summarization
- Conversational knowledge
- Content creation
- Code co-creation

Key advantages

- Lower upfront costs through less labeling
- Faster deployment through fine tuning
- Equal or better accuracy for multiple use cases
- Incremental revenue through better performance

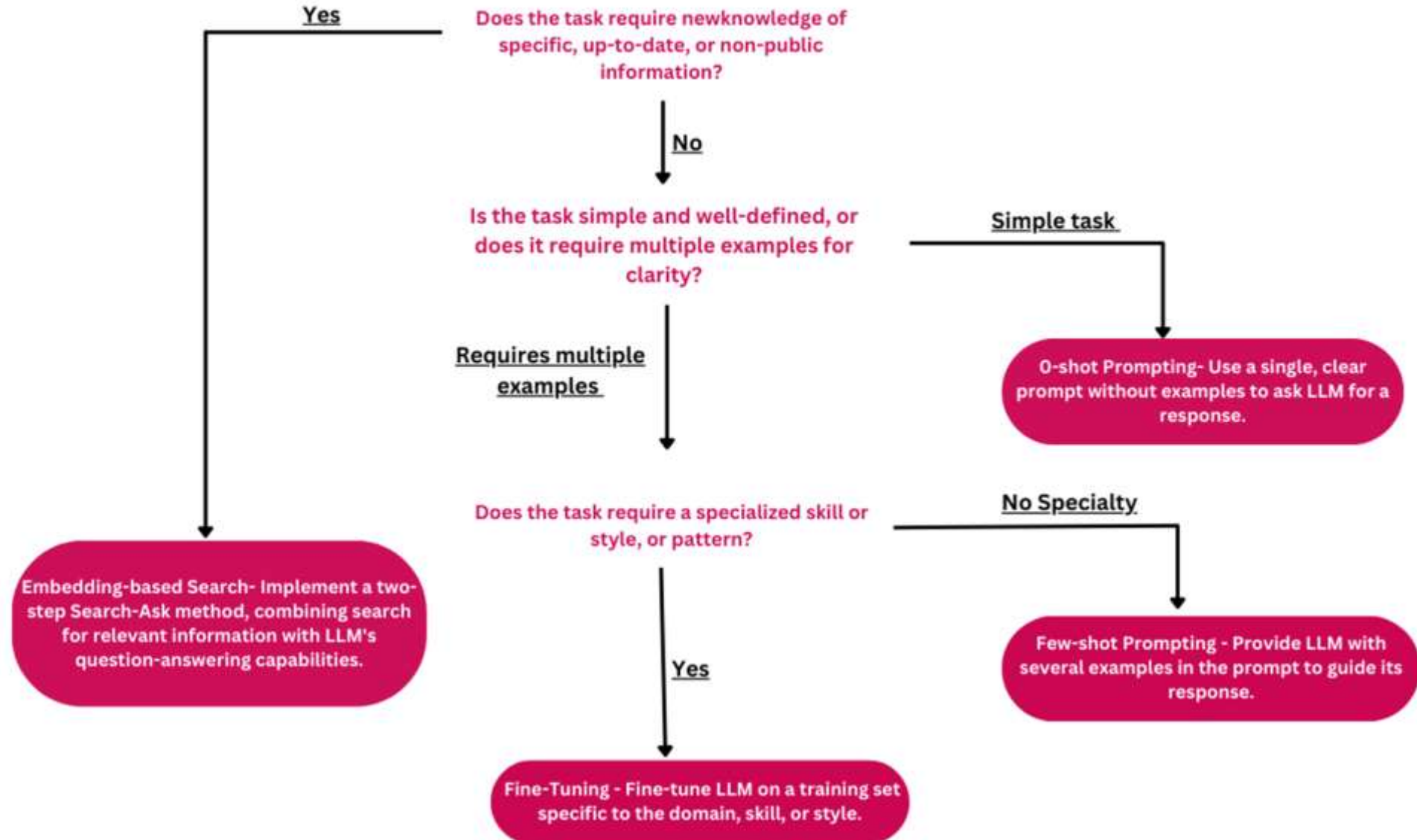
up to **70% reduction**
in certain NLP tasks

Opportunity to unlock business advantage with foundation models trained across the breadth of enterprise data



Foundation models Adoption Strategy

0-shot vs Few-shot vs Fine-tuning vs Embedding



Generative AI has immense potential to accelerate digital transformation

“GenAI accelerates discovery. So, discovery becomes the competitive advantage of the future “

*Scale of impact points to swift adoption over **next 3 years***

\$3-4T forecasted economic benefits to the global economy across industries

80% of enterprises will have incorporated Gen AI into their business processes

80% productivity gains across classes of knowledge workers and creative tasks

70% of software vendors will integrate Gen AI in their enterprise applications

Agenda

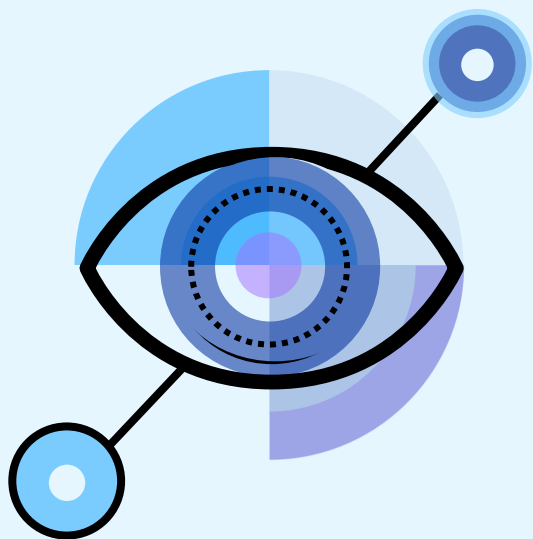
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What's your **AmbI**tion?



Everyday AI

Free up employees
for higher value work

Game changing AI

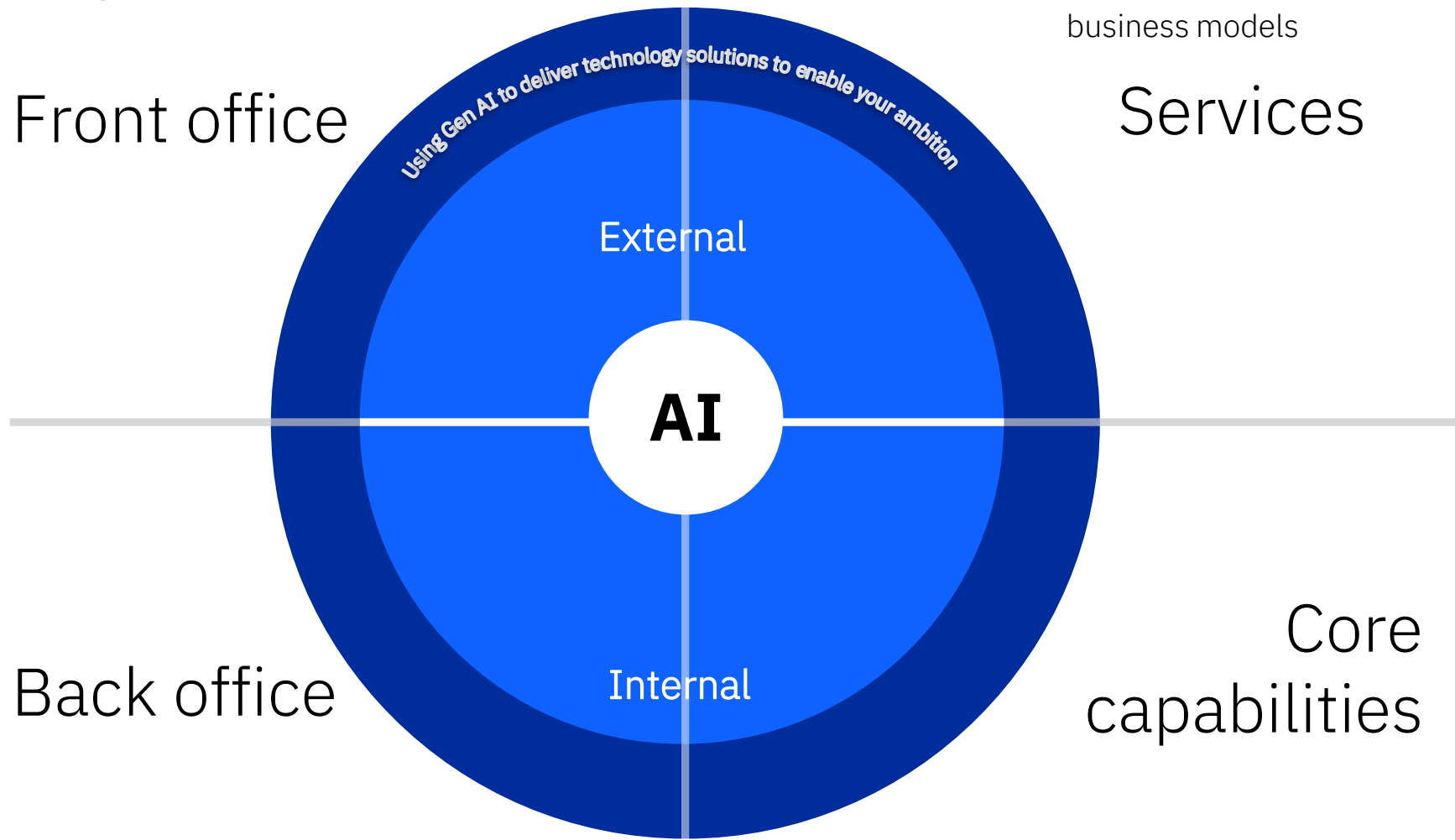
Fuel new experiences, new
revenue streams, and new
business models

Front office

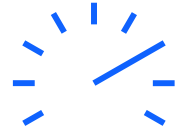
Services

Back office

Core
capabilities



We see four focus areas where GenAI capabilities are driving the biggest impact



Extreme Process Digitization

Transform processes into automated and insights driven intelligent workflows

AI-powered automation

Many organizations are taking a cutting-edge approach to data-driven innovation, including employing predictive approaches and implementing tech-infused workflows.

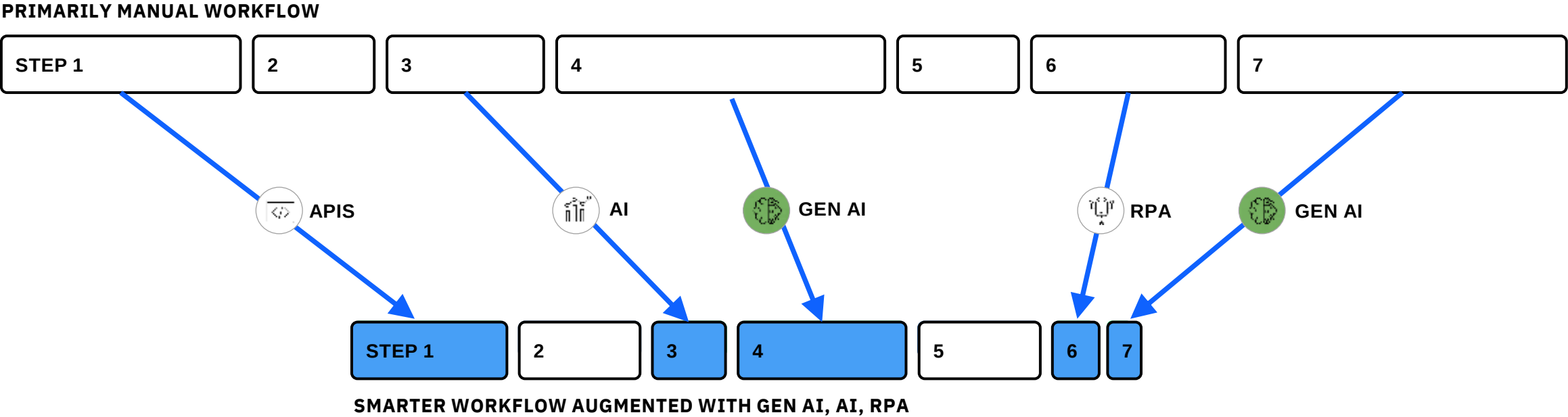
They are accelerating their investments in digital technologies.

91%

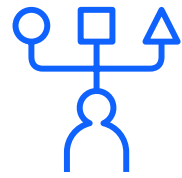
of polled executives state that their organization's workflows will be digitized and will leverage GenAI-powered automation by 2026.

Source: IBV 2023 AI & Automation Study Q10. Workflows will be digitized with intelligent automation and digital labor.

Generative AI Presents A **Great Opportunity** To Re-imaging And Re-engineering Workflows By **Orchestrating** Traditional AI, Gen AI And Automation



We see four focus areas where GenAI capabilities are driving the biggest impact



AI-powered Decision Making

Augment expert's decisions with better insights and prediction

The nature of work

Generative AI technology promises to transform the way work gets done across the business community.

80%

agree that Generative AI will fundamentally *change how people do their jobs*

Source: IBV 2023 AI & Automation Study Q6. Thinking about your organization's automation strategy over the next 3 years, to what extent do you agree with the following statements? Agree. Strongly Agree. All respondents.

Does this messages sound familiar ?

Attention XXXXXXXX (XXXXXXXXXXXX)
Income Tax Department **has identified** certain information related to **high value transactions**, which does not appear to be **in line with** the Income Tax **Return filed** by you for the Assessment Year 2024-25 (relating to FY 2023-24). You can view the information on compliance portal. Please submit your response online under e-Campaign tab on Compliance Portal or revise your ITR.

If the information has been correctly accounted for in your ITR, you may ignore this message. Thank you, – Income Tax Department.

*Some references have come to the notice of the Income Tax Department regarding recent communication sent to taxpayers pertaining to transaction(s) made by them. Taxpayers may pl note that such communication is to facilitate the taxpayers & **make them aware of the information available with the ITD** regarding the transactions reported by the Reporting Entities during the year. It is not a notice sent to all taxpayers, but is an advisory sent in only those cases where there is an **apparent mismatch between disclosures in the ITR & information as received** from the Reporting Entity. The objective of the communication is to provide an opportunity to taxpayers & facilitate them to provide their feedback online on the Compliance Portal of ITD &, if necessary, **revise their Returns** already filed OR to file the Return if not filed, so far.*

Project ADVAIT : Advanced Analytics In Indirect Taxation



ADVAIT is **first-of-a-kind** integrated AI platform for tax fraud analytics built by IBM using innovative AI/ML techniques.

Business Objective:

- Prompting taxpayers about mismatches in ITRs and transactions linked to their Pan/Aadhar card to encourage return revisions.
- Data-Driven Tax Policy implemented for Identifying taxpayers for advance tax payment and sending them proactive reminders.
- Using data analytics over networks of taxpayers to visualize the taxpayers relationships and to flag potential high-risk transactions

Transformative impact of GenAI and ML based platform on the tax collection and recovery process for India



50x RoI

Return on Investment for
client



\$5 Billion+

GST Tax fraud detected within 2
years of deployment



150%

YoY Growth in tax revenue
collection despite disruptive
impact of Covid-19 pandemic



2000+

Fraud cases filed and are
under investigation which was
not possible earlier



2.5M+ Days

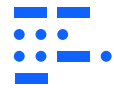
Saved efforts of senior revenue
service officers in manually
investigation and validation
after receiving the intel



Level 1 to 5

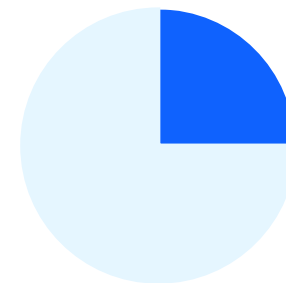
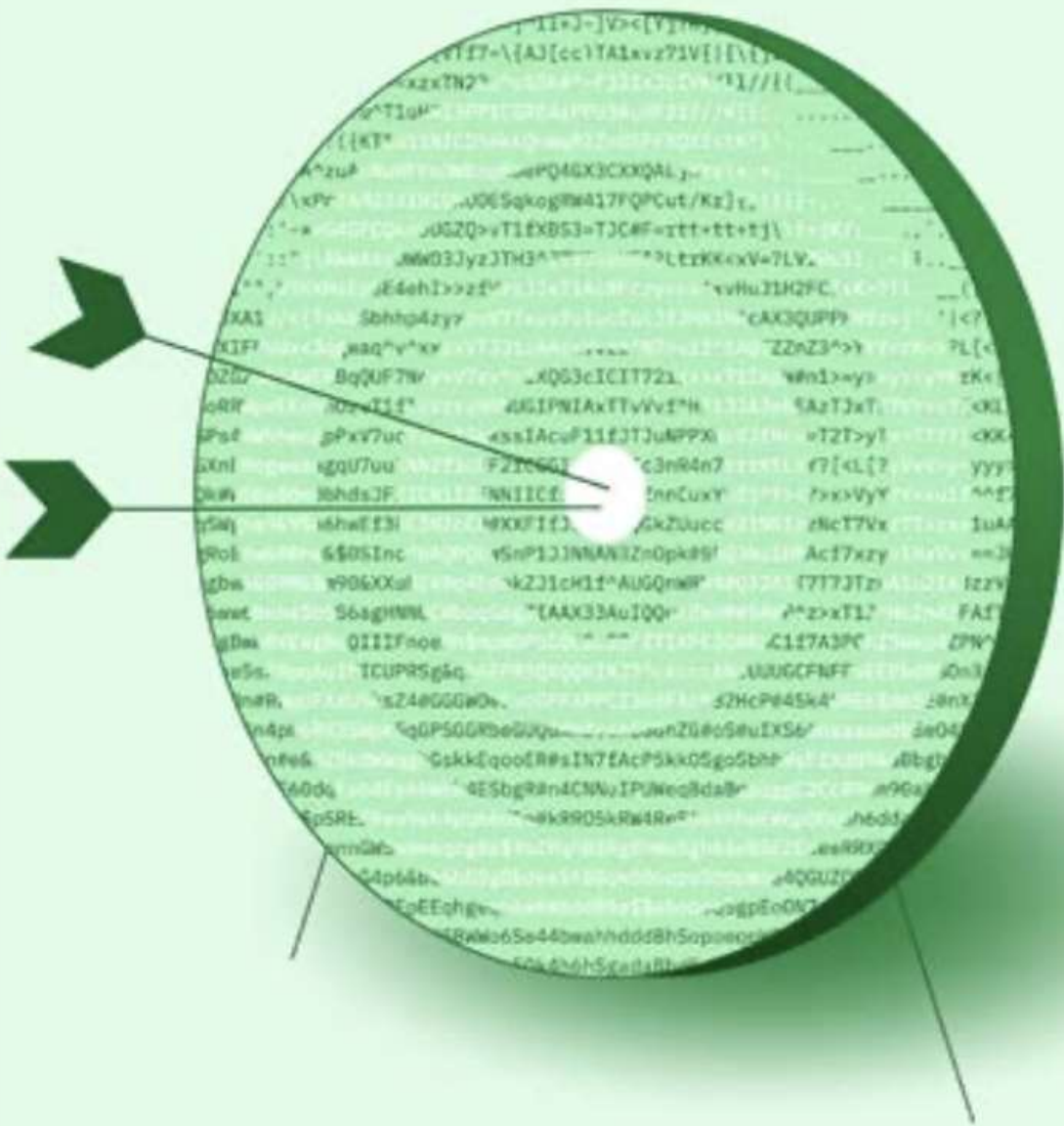
AI adoption for Client matured
from Level 1 to 5 with all
pervasive application of AI

We see four focus areas where GenAI capabilities are driving the biggest impact



Content and Code Creation

Increase productive and accelerate creative content and software code creation



Services & Products

Game Changing AI :
Advertisement
Generation for Digital
Marketing Campaign



Current Scenario and Pain Points



Time taken from brief creation to release of ad

5 to 8 days or more

Time taken in vendor coordination and review

2 to 5 days or more

Personalization and target marketing

Lacks speed and agility

Teams involvement

Marketing team, Product team, Vendors

Frequency of ads

Variable – Daily/ Weekly/ Monthly

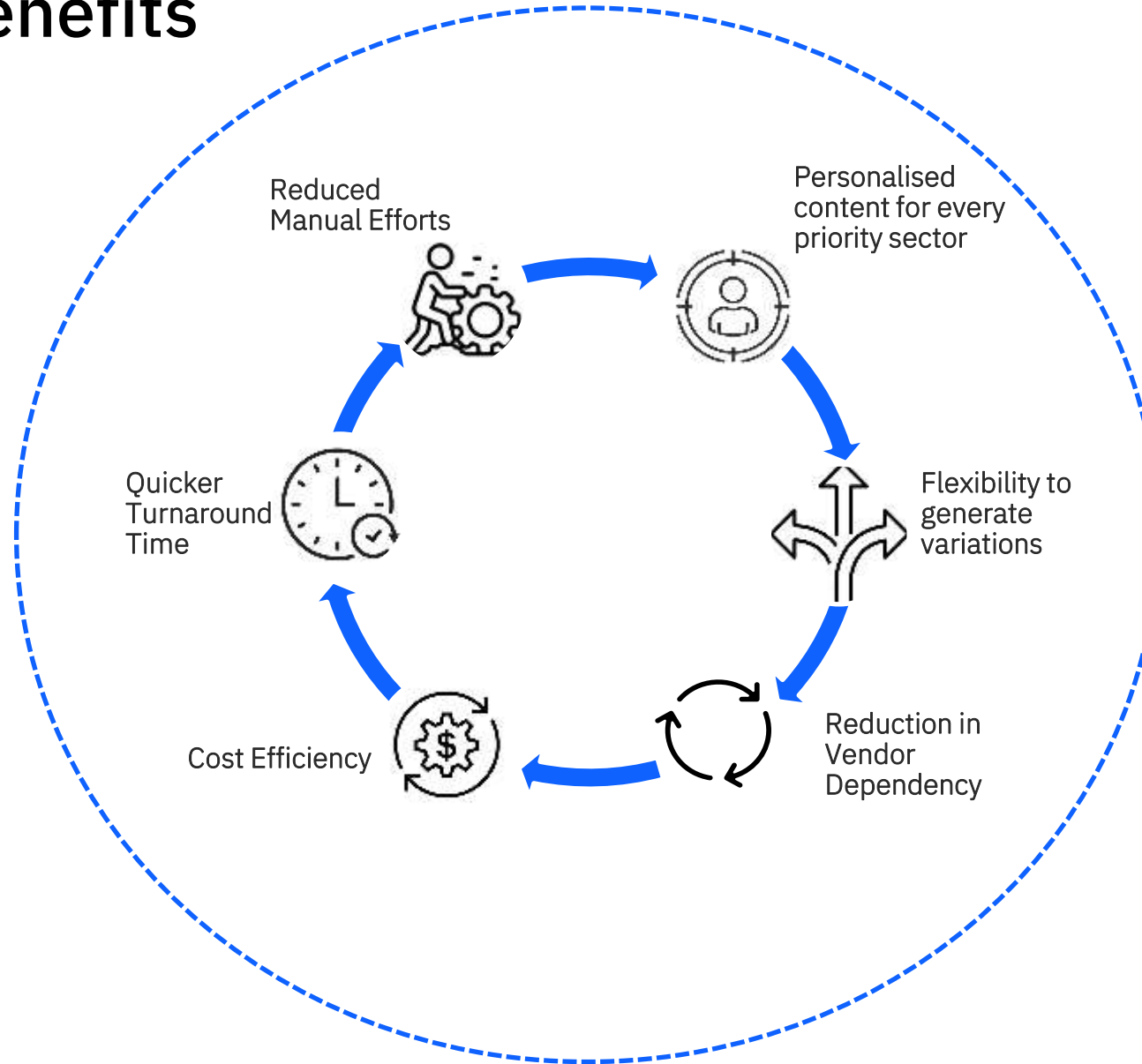


GenerativeAI Prompt :

Gender – Female, **Age** – 20-30, **Lifestyle** – Indian Urban, Higher Education

Mood Shot - A young girl with a backpack, and a paper roll is standing in front of Gothic architecture in Spain, with a broad smile on her face.

Business Benefits



>90% faster
time to market

>80% increase in
process efficiency

55-77% reduction
in labour hours

We see four focus areas where GenAI capabilities are driving the biggest impact

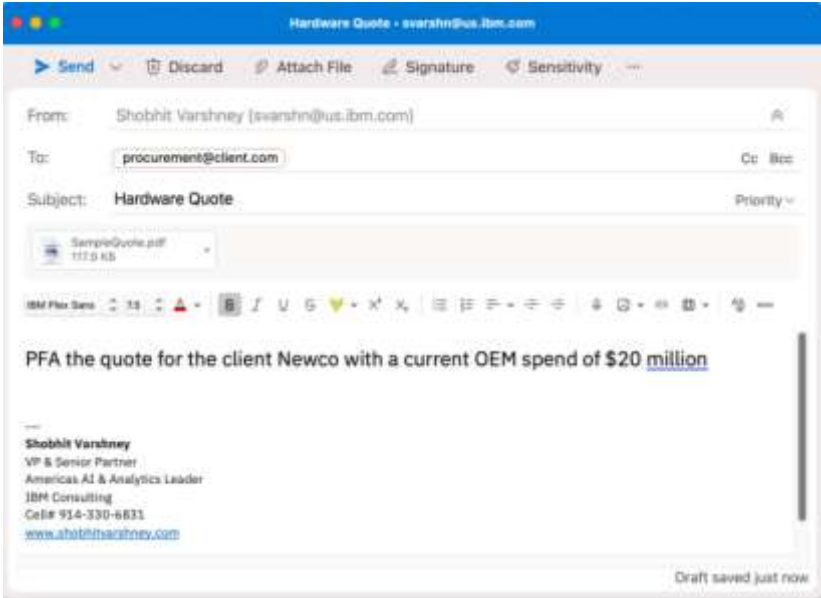


Reimagined Customer and Supplier Engagement

Embed personalized offers into Customer and Supplier journeys

Verify quotes against contractual discount

VENDOR EMAIL



SampleQuote.pdf
Page 1 of 3

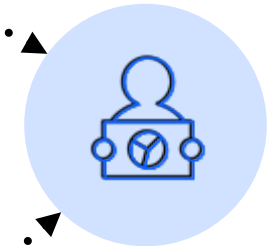
REMIT PAYMENT TO:
ABC LLC
PO Box 123456
Seattle WA 98124-1740

PLEASE SEND PURCHASE
ORDERS DIRECTLY TO YOUR
ABC LLC ACCOUNT MANAGER
VIA FAX OR EMAIL.

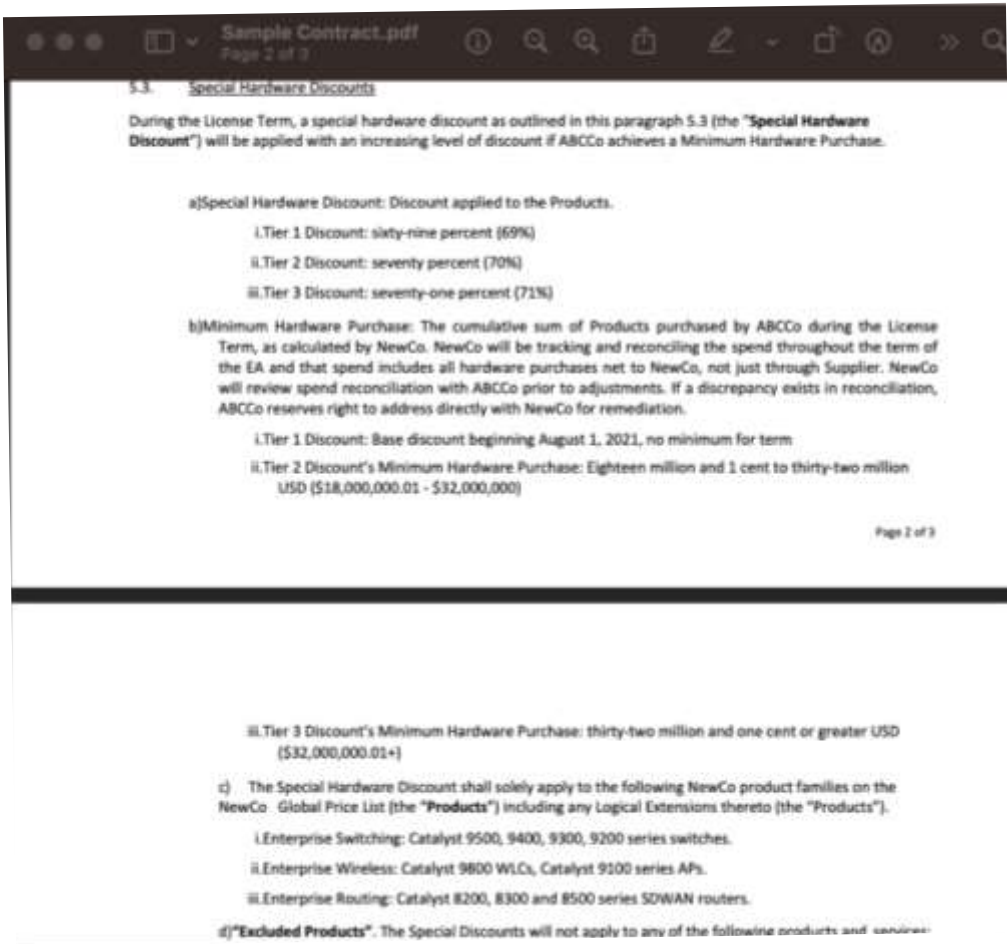
Jane Doe
Account Manager, GAM
Phone: 123-456-3746
Email: jane.doe@ABC.com

Item #	Qty	Qty. Name	Description	Manufacturers Part #	Unit Price	Total	Discount
23456789	2	NEWCO SYSTEMS INC.	Catalyst C6300-Plaster	GSS8300-IR-1	\$6,190.00	\$9,285.00	71%
56789012	2	NEWCO SYSTEMS INC.	Advanced Pluggable for north America	GSSP204-US-1	\$425.00	\$798.00	8%
24567890	2	NEWCO SYSTEMS INC.	Catalyst 9800-L Wireless	GSS8600-LP1	\$2,984.00	\$5,368.00	89%
32045678	2	NEWCO SYSTEMS INC.	Catalyst 9500	GSS8600-MK-4	\$10,005.00	\$18,400.00	71%
45678901	2	NEWCO SYSTEMS INC.	NewCo pluggable 320 storage	GSSSD002-HG-B	\$1,180.00	\$1,180.00	0%
45678902	11	NEWCO SYSTEMS INC.	Catalyst 9300 48-port Network	GSS2000-XM-F	\$685.00	\$7,535.00	89%
90807890	2	NEWCO SYSTEMS INC.	AD CONFIG 4 POWER SUPPLY	GSSAD004-CP-4	\$621.00	\$1,242.00	0%
32045678	2	NEWCO SYSTEMS INC.	Catalyst 9500	GSS8600-MK-4	\$10,005.00	\$18,400.00	71%
45678901	2	NEWCO SYSTEMS INC.	NewCo pluggable 320 storage	GSSSD002-HG-B	\$1,180.00	\$1,180.00	0%

QUOTE ATTACHED



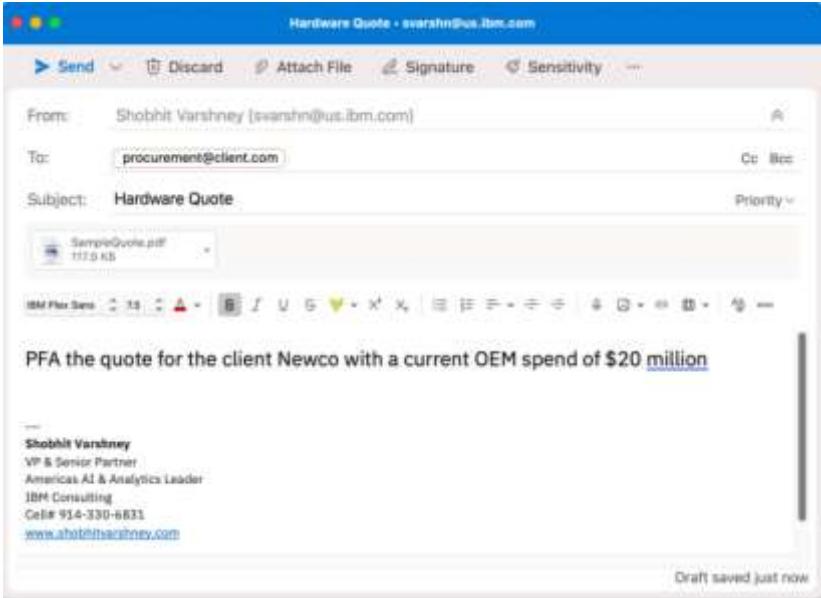
MANUALLY REVIEW
EACH QUOTE AND
CONTRACT TO VERIFY
DISCOUNT PER ITEM



UNSTRUCTURED CONTRACTS

Verify quotes against contractual discount

VENDOR EMAIL



REMIT PAYMENT TO:
ABC LLC
PO Box 123456
Seattle WA 98124-1740

PLEASE SEND PURCHASE
ORDERS DIRECTLY TO YOUR
ABC LLC ACCOUNT MANAGER
VIA FAX OR EMAIL.

Jane Doe
Account Manager, GAM
Phone:123-456-3746
Email:jane.doe@ABC.com

Item #	Qty.	Mfr. Name	Description	Manufacturer Part #	Unit Price	Total	Discount
23456789	2	NEWCO SYSTEMS INC.	Catalyst C8300-Plaster	GSS8300-IR-1	\$6,193.00	\$9,289.00	71%
56789012	2	NEWCO SYSTEMS INC.	Advanced Pluggable for north America	GSSP204-US-1	\$426.00	\$798.00	8%
24567890	2	NEWCO SYSTEMS INC.	Catalyst 9800-L Wireless	GSS9800-LP1	\$2,984.00	\$5,368.00	89%
32045678	2	NEWCO SYSTEMS INC.	Catalyst 9300	GSS9300-MK-4	\$10,005.00	\$18,400.00	71%
45678901	2	NEWCO SYSTEMS INC.	NewCo pluggable 320 storage	GSSSD002-HG-B	\$1,180.00	\$1,180.00	0%
450XAA2	11	NEWCO SYSTEMS INC.	Catalyst 9300 48-port Network	GSS9300-XM-F	\$6,805.00	\$74,855.00	89%
9080THD	2	NEWCO SYSTEMS INC.	AD CONFIG 4 POWER SUPPLY	GSSAD004-CP-4	\$621.00	\$1,642.00	0%
32045678	2	NEWCO SYSTEMS INC.	Catalyst 9300	GSS9300-MK-4	\$10,005.00	\$18,400.00	71%
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QUOTE ATTACHED

INSTANT RESPONSE FROM AI
HIGHLIGHTING THE 2 ITEMS WHERE THE
QUOTE DISCOUNT < CONTRACTUAL DISCOUNT

[EXTERNAL] RE: Hardware Quote

Procurement <procurement@client.com>
Re: Shobhit Varshney

Hello,
I hope this email finds you well. I am writing to inform you that 2 products from our recent quotes did not meet the discount criteria. Therefore, I kindly request your assistance in verifying this with your provider.

Please see the details of the items below:

Item #	Qty.	Mfr. Name	Description	Mfr Part #	Unit Price	Total	Quote Discount	Contractual Discount	Rationale	Orig Quote	Orig Contract
450XAA2	11	NEWCO INC.	Catalyst 9300 48-port Network	GSS9300-XM-F	\$6,805.00	\$74,855.00	69%	70%	Tier 2 Special Hardware	[Link]	[Link]
245840XN	2	NEWCO INC.	Catalyst 9800-L Wireless	GSS9800-LP1	\$2,684.00	\$ 5,368.00	69%	70%	Tier 2 Special Hardware	[Link]	[Link]

Please provide me with the necessary information at your earliest convenience. Thank you for your prompt attention to this matter.

Sincerely,
Verification Team

Insurance Risk & Compliance Benefit from Digital, AI & Generative AI

	Risk Identification	Risk Assessment	Risk Mitigation	Compliance Framework	Monitoring and Reporting	Internal Controls	Regulatory Reporting	External Audits	Governance & Oversight
Key Activities	- Identify & assess various risks - risk assessments & scenario analyses - Monitor industry trends & regulatory changes - Regularly review internal processes	- Evaluate the potential impact and likelihood - models and quantify risks - Assess risk concentrations and correlations - Classify based on severity/ priority.	- Strategies to mitigate risk - Implement risk controls - Diversify portfolios to spread risk. - Establish contingency plans	- Comprehensive compliance framework - Identify relevant regulations standards - Establish compliance policies and procedures.	- Monitor ongoing activities for compliance and risk levels - continuous monitoring - Regular risk and compliance reports - Ensure segregation of duties to prevent fraud.	- Implement Internal controls compliance - Conduct internal audits. - Perform regular reconciliations - Ensure segregation of duties to prevent fraud.	- Submit accurate and timely reports to regulatory authorities - Update on reporting requirements - Ensure data accuracy and completeness - Regular Audits	- Conduct external audits - Prepare Documentation for audit - Address findings & recommendations - Collaborate with external auditors during the audit process	- Robust Governance structure - Risk and compliance committee - Regular review and mitigation action - Responsibility and accountability
Digital Interventions - Intelligent workflow, rule engine, advanced AI, & Transaction system	- AI/ML models & rule engine to identify risk, pattern & anomaly - Intelligent workflow for routing	- AI/ML Predictive assessment - Rule engine for scoring - Advance model for risk reporting	- Intelligent workflow for mitigation - AI/ML for mitigation scenarios	- Workflow for development/ maintenance - NLP for understanding regulations	- Automate monitoring via intelligent workflow - AI/ML/rule engine to detect patterns and anomalies	- Automatic internal controls - AI/ML/Rules to identify anomaly deviation	Automated reporting tools can generate accurate and timely regulatory reports.	Intelligent workflows & reporting tools to support audit	- Intelligent workflows to streamline governance - Dashboard for reporting
Benefits From Digital Intervention	40 to 60% improvement in productivity - Higher accuracy in risk identification	60 to 80% improvement in productivity	40 to 60% improvement in productivity	50 to 60% Improvement in productivity	> 80% productivity improvement	60 to 80% improvement in productivity	> 80% productivity improvement	40 to 60% improvement in productivity	80% improvement of dropouts or opportunity loss
Generative AI Intervention & Capability Used	Conversational search & summarization to analyse vast amounts of news articles, and regulatory updates, to identify emerging risks and trends	- Enhanced risk assessment model - Better identification of patterns & correlations	Enhanced risk assessment model & scenario analysis	Insight extraction and support preparation & regular update of compliance framework	Real time monitoring of data & documents flagging anomalies or potential non-compliance	Real time monitoring of compliance & flagging anomalies or potential non-compliance	Limited application	Limited application	Limited application
Benefits From Generative AI	20 to 30% improvement in productivity	Improved accuracy in risk quantification and assessment	10 to 15% improvement in productivity	10-15% productivity - Updated framework	10 to 15% productivity - Swift detection	10 to 15% productivity - Swift detection	NA	NA	NA

Practical usecases of Generative AI for Actuaries

Documentation

- Drafting or updating actuarial reports, emails, and other communications.
- Enhanced search engine for specific documents (SOPs, practice notes laws and regulations, etc.)
- Virtual peer reviewer to identify errors in work or typos in text
- Automated model documentation

Simulation and Visualization

- Creating Structured data from unstructured data
- Synthetic data generation and scenario construction
- Data analysis and visualization

Actuarial Studies

- Study aid / virtual tutor for actuarial Exams
- Extract formulas or data from documents
- Suggest which actuarial methods to use to solve

Coding

- Coding copilot: write or debug database queries or program code
- Code translation / model migration from Excel to other languages
- Refactor repetitive code

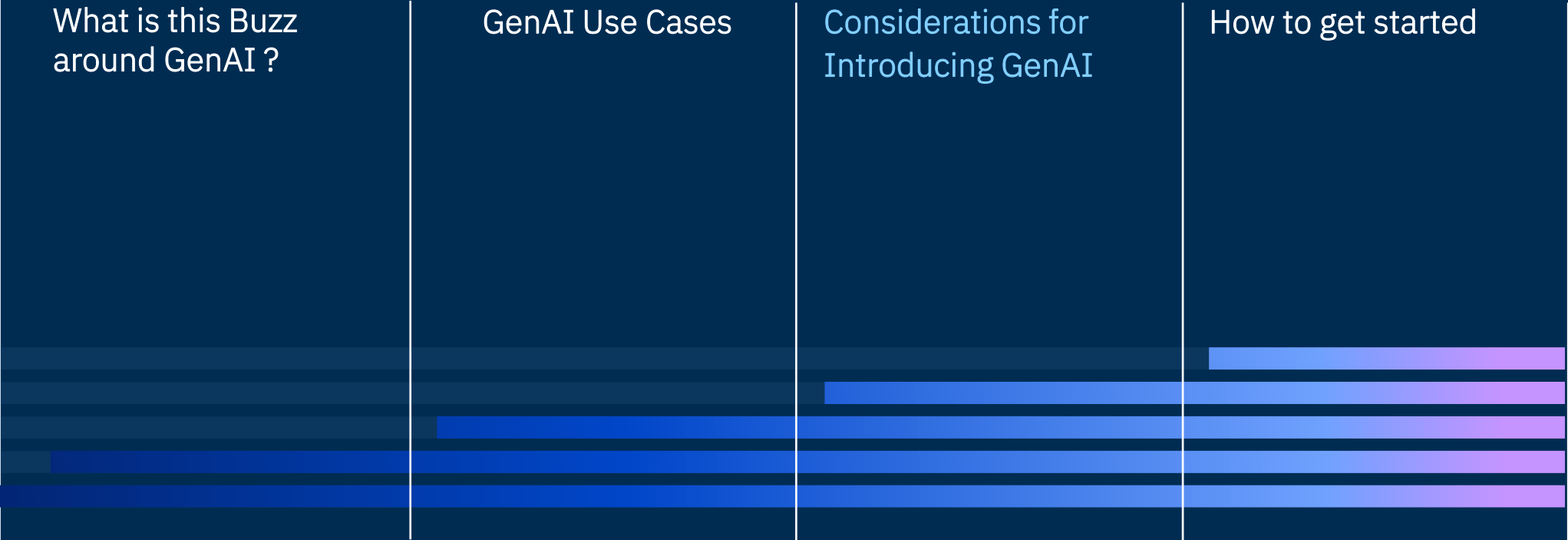
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What's Holding Organizations Back?



Governments globally are mobilizing to seize opportunities and respond to emerging challenges.

EU AI Act: first regulation on artificial intelligence

Society Updated: 14-06-2023 - 14:06
Created: 09-06-2023 - 11:40

The use of artificial intelligence in the EU will be regulated by the AI Act, the world's first comprehensive AI law. Find out how it will protect you.

EU Late to the Quantum Party, Report Warns >
With quantum computer cyberattacks looming, high-value targets brace for impact

INNOVATION

**Australian Government:
Ethical AI Will Unlock \$20T
Global Opportunity**

QUANTUM | NEWS

Australia sets out A\$1bn national quantum strategy

20th 2023

US state legislatures take the lead in AI regulation surge in 2023

In 2023, state legislatures in the US took the lead in AI regulation with a 440% increase in AI-related bills compared to the previous year. While 191 bills were introduced, only 14 became law. Deepfakes, government AI usage, and privacy issues dominated discussions.

**Interim guidance on government use of public generative AI tools -
November 2023**

Guidance for Australian Public Service (APS) staff

**UAE AI Minister: Global consensus
needed on AI governance**

THE WHITE HOUSE



**Executive Order on the Safe, Secure,
and Trustworthy Development and
Use of Artificial Intelligence**

NATIONAL QUANTUM INITIATIVE

THE FEDERAL SOURCE AND GATEWAY TO QUANTUM R&D ACROSS THE U.S. GOVERNMENT

**UK poised to establish global advisory group on
AI**

The British government wants to draw on expert knowledge about the fast-developing technology

**UK Government Announces Five Quantum Missions as Part of Its
National Quantum Strategy**

**UK and US develop new global
guidelines for AI security**

New guidelines for secure AI system development will help developers of any systems that use AI make informed cyber security decisions at every stage of the development process.

**Exclusive: Southeast Asia eyes hands-off
AI rules, defying EU ambitions**

AI Adoption: India story

94%

Say that Trust in AI is key as the ability to explain how their AI reached a decisions is important to their business

74%

Of Indian enterprises already working with AI and have accelerated their investments in the past 24 months

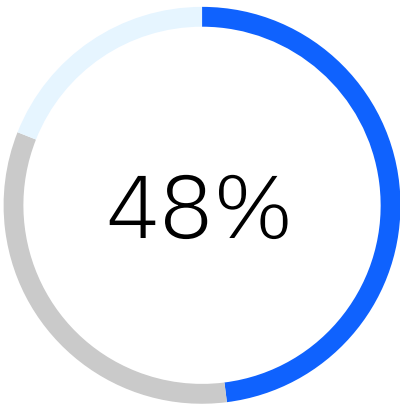
54%

However, only 54% of AI projects make it from Pilot to Production!

Business leaders face challenges in scaling AI across the enterprise with trust

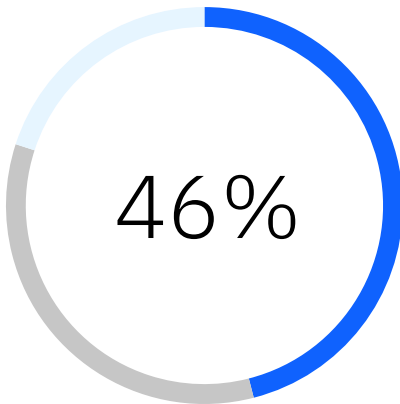
80% of surveyed business leaders see at least one of these ethical issues as a major concern¹

Explainability



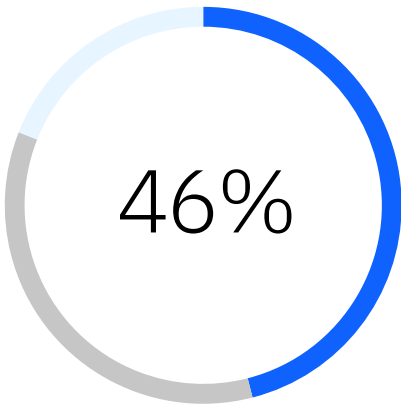
believe decisions made by generative AI are not sufficiently **explainable**

Ethics



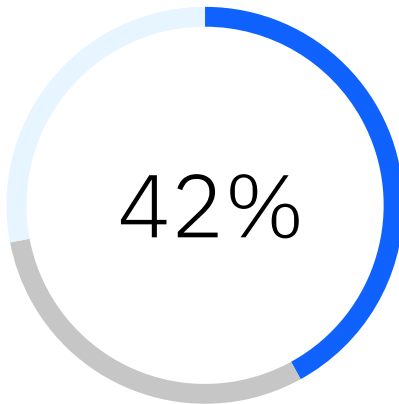
concerned about the safety and **ethical** aspects of generative AI

Bias



believe that generative AI will propagate established **biases**

Trust



believe generative AI cannot be **trusted**

Four core principles to tailor generative AI for enterprise

Open

→ Based on the best AI and cloud technologies available

→ Giving access to the innovation of the open community and multiple models

Targeted

→ Designed for targeted business use cases, that unlock new value

→ Including curated models that can be tuned to proprietary data and company guidelines

Trusted

→ Built with AI and data governance, transparency, and ethics that support increasing regulatory compliance demands

→ Providing guidance on appropriate models to leverage to create real business value with trust

Empowering

→ On a platform to bring your own data and AI models that you tune, train, deploy, and govern

→ Running anywhere, designed for scale and widespread adoption to truly create enterprise value

Why are CXOs worried about GenAI?

What happens if models are trained on bad data?

What if sensitive data ends up in models and subsequently finds its way out to users of the AI?

What if the underlying algorithms are not inherently fair?

What if training data is not accurate or current?

What if data owners change their minds?
Can we ever make models un-learn?

Who is responsible if users receive harmful responses?

Does merely using GenAI break certain types of regulatory compliance?

What if GenAI is used by bad actors?

How can we distinguish human created content from GenAI created content?

Should we allow employees to use GenAI?

If we don't allow it, will we be left behind?

How can security teams manage GenAI based applications?

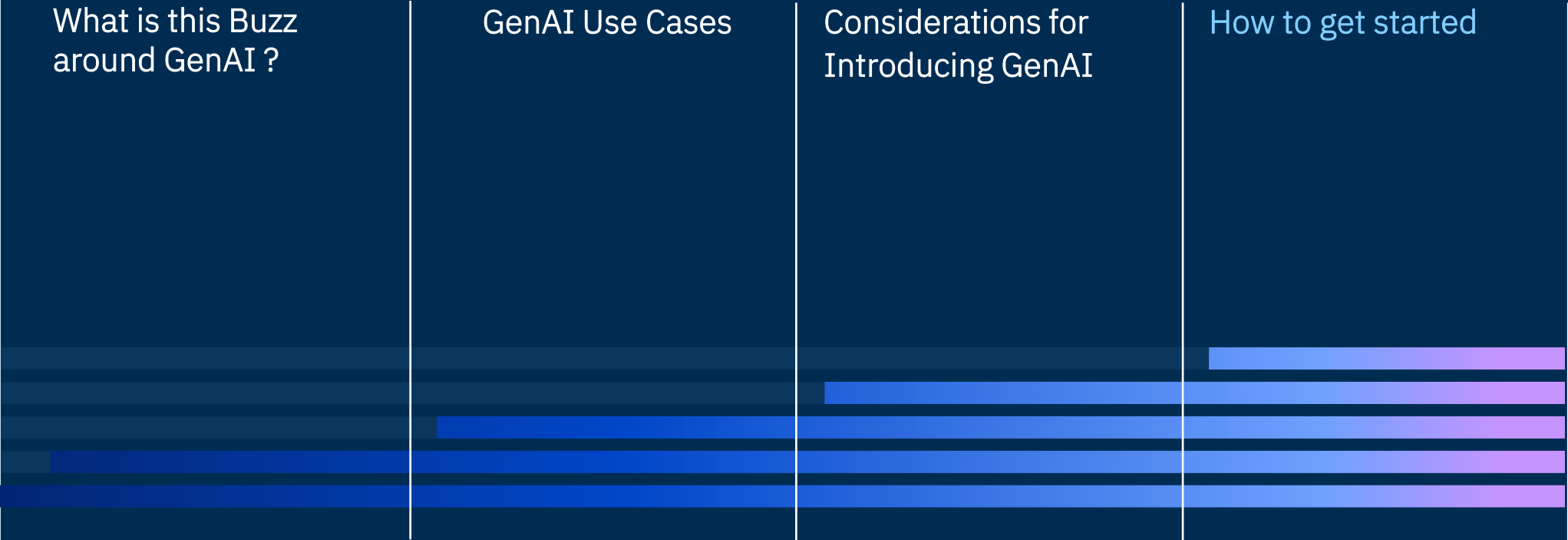
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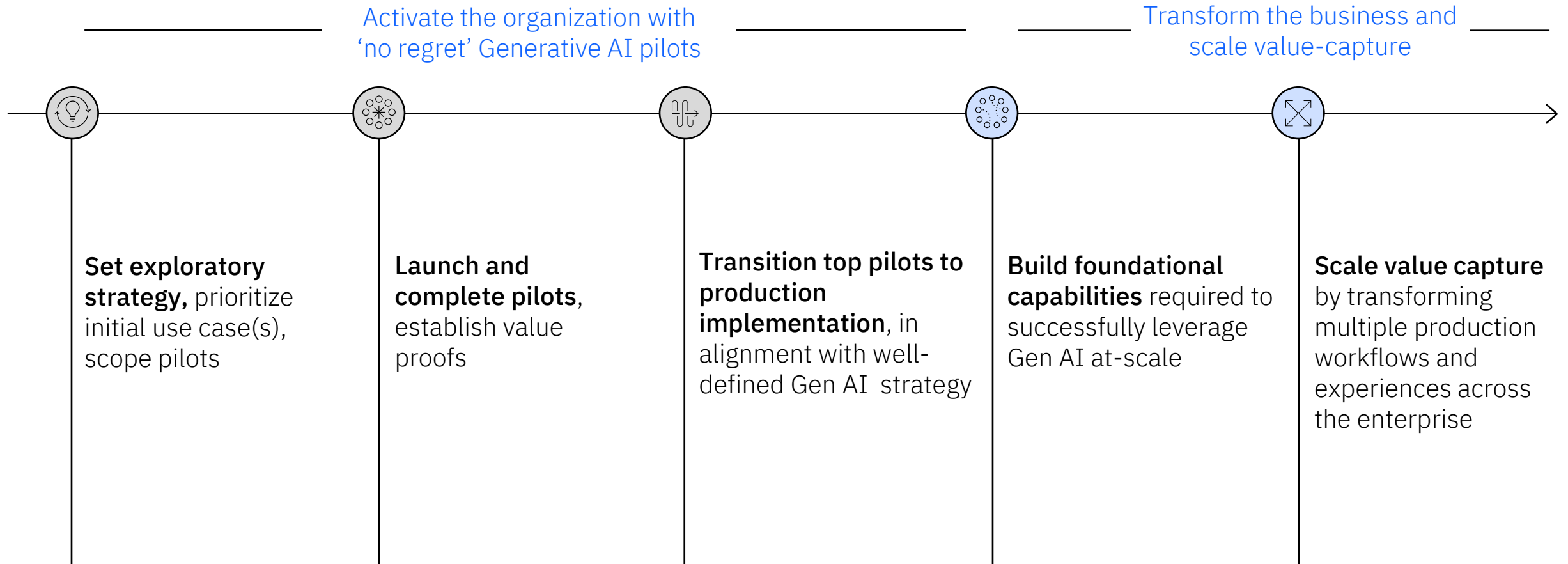
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IBM can help you along your AI transformation journey to unlock value at-scale

From rapid activation in a “no regrets” pilot to a holistic transformation effort



Only way to keep

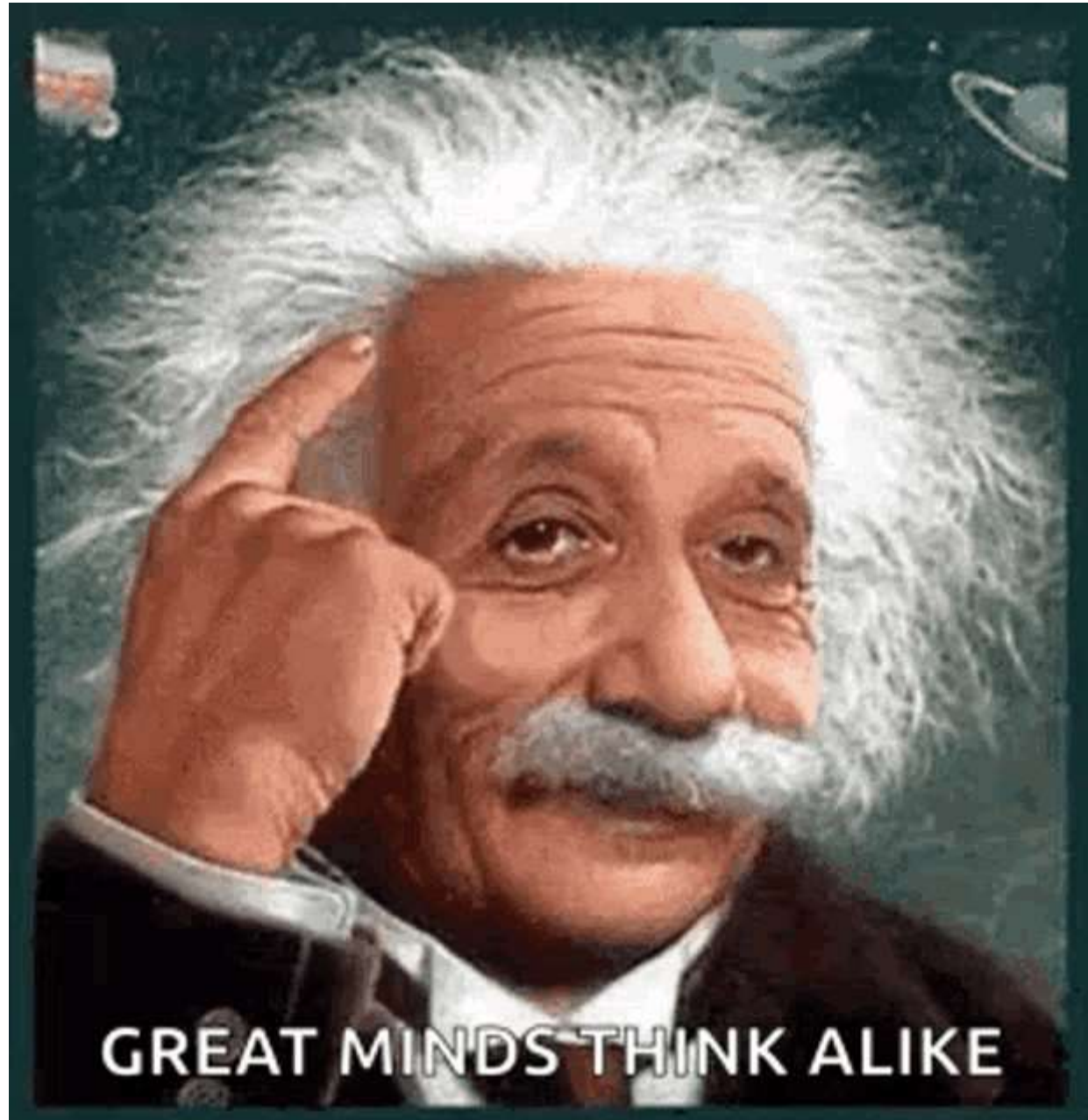
AI

from taking your Job

Is to

use AI

to do your job better





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India/SA

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