

## PANEL DISCUSSION - 4

### *Enhancing Internal Audit Function & Roles Through Artificial Intelligence*

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## TRUSTED ADVISOR: NAVIGATING THE NEW FRONTIER,

*Connecting Between Information Technology  
and Business Strategy*

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# Enhancing Internal Audit Function & Roles Through Artificial Intelligence

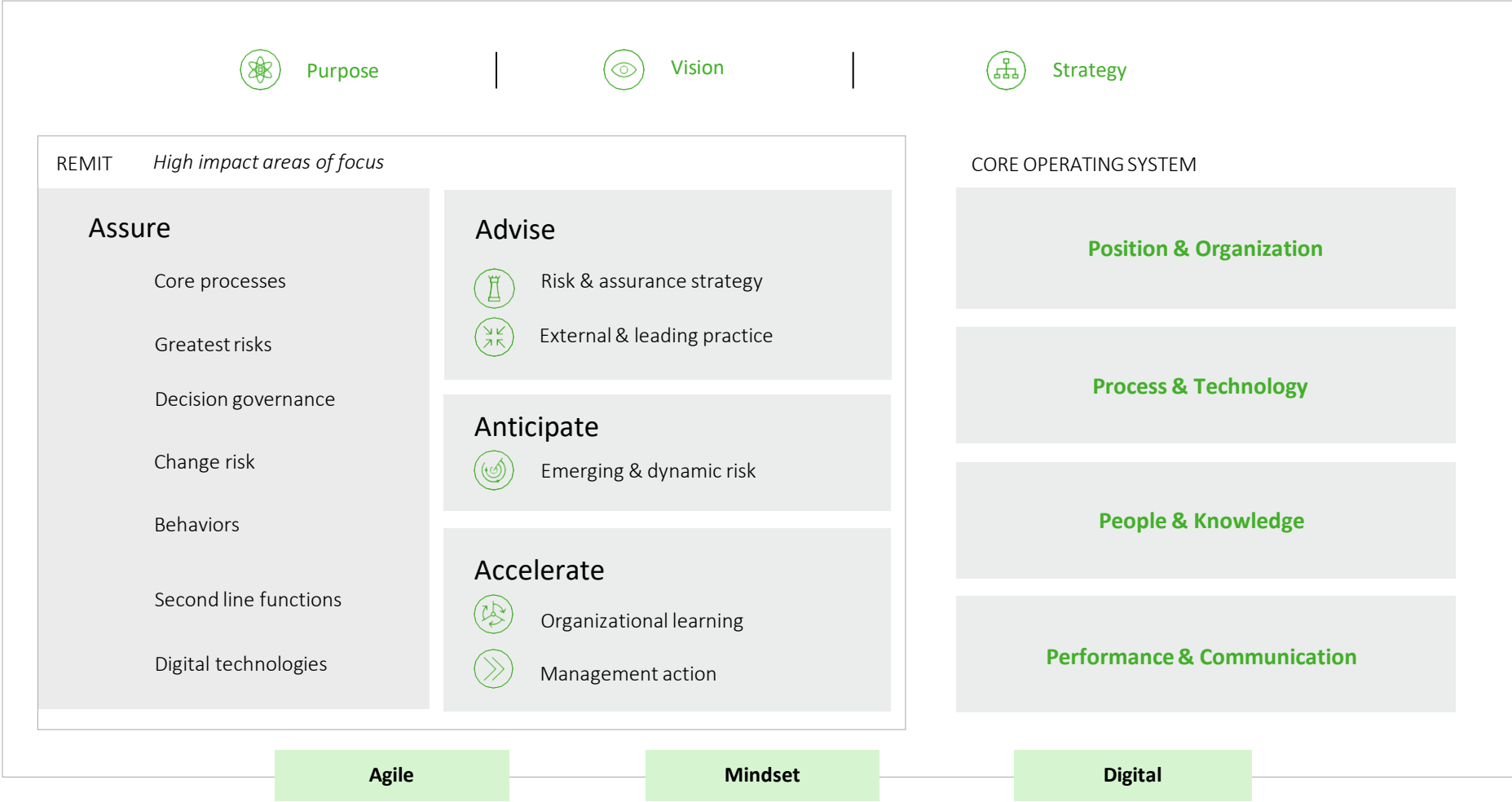
Antonius Augusta, Deloitte

December 2023



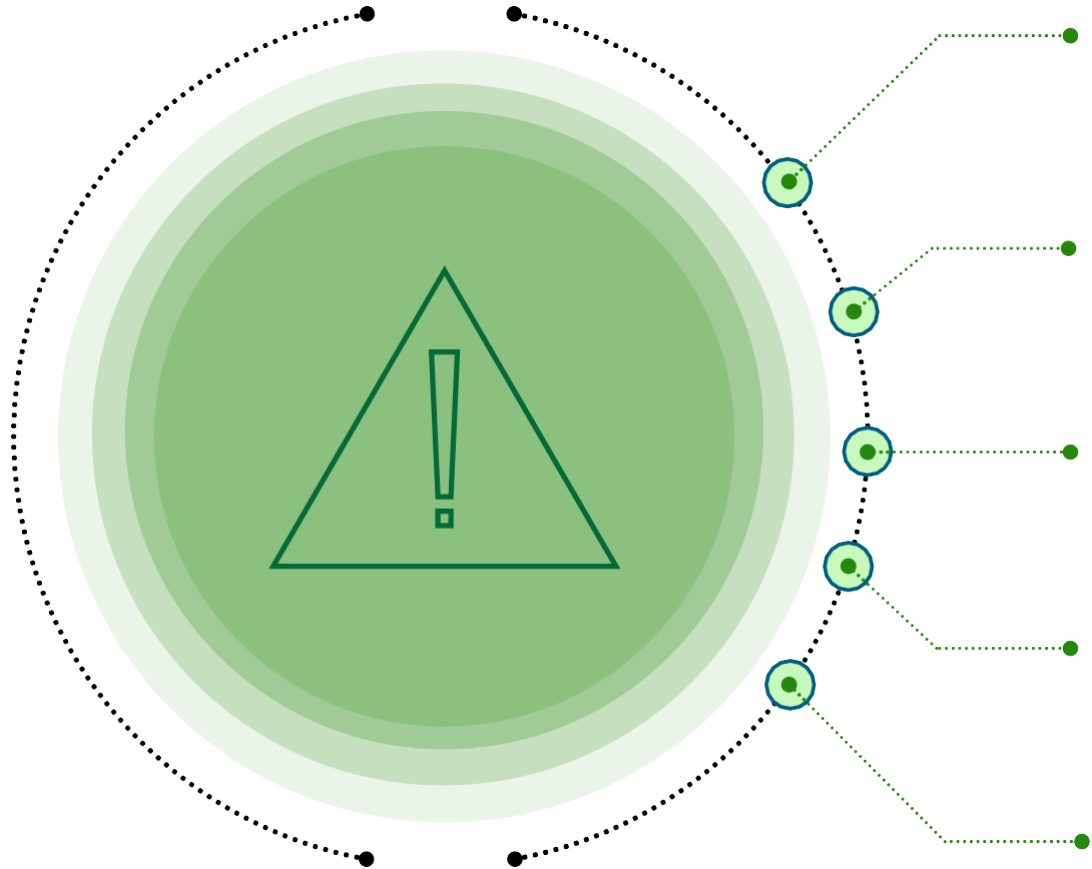
# The Case for AI in Internal Audit

# Deloitte's Internal Audit Framework



AI has a key role to play across all the framework elements

# AI Trends



## AI Everywhere & Available to Everyone

With the onset of Generative AI, AI is now in the hands of 'everyone' and is not just the domain of technical AI programmers.



## AI Enabled Service Delivery

With Generative AI available to 'all', AI is now being used by staff to generate deliverables either directly or indirectly for our clients. This enables efficiency optimising effort of course but at the same time introduces risk.



## Appropriate Transparency, Governance & Accountability

In many cases AI has been implemented without fully considering its risk and governance placing the reliability, accuracy and effectiveness of the AI operations/output at risk.



## Transformation of the 2<sup>nd</sup> & 3<sup>rd</sup> Line

Much investment has been spent on enabling AI technologies to support the first line of defense. The transformation of the 2<sup>nd</sup> & 3<sup>rd</sup> lines of defense has and continues to lag.



## Transforming People – Future AI Enabled Risk Workforce

Whilst on the technical front AI is advancing rapidly with the development of various tools, applications and solutions, often the people are not being transformed accordingly and therefore are 'responsible' for AI models they do not understand.

# Two Main Categories of AI



Discriminative AI

Traditional AI models focus on understanding data and making accurate interpretations and predictions.



Generative AI

AI power to "the Masses". Generative AI involves building & training models to generate new content.

*Both categories have application and relevance to Internal Audit*

Text Generation



Image Generation



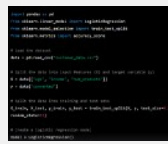
Video Generation



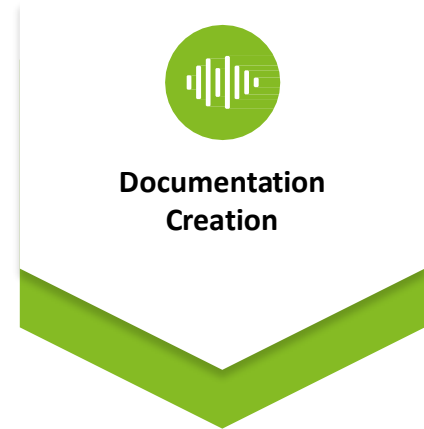
Audio Generation



Code Generation



# Generative AI's Ability to Transform Internal Audit



Generate natural language reports and summaries of audit findings, making it easier for auditors to communicate their findings to stakeholder



Ability to research complex accounting questions through smart search mechanisms



Inspection of source documentation to produce summarized text and a consistent evaluation



Use of natural language to interface technology across an organization, such as risk and audit platforms and external sources.



# What Can AI do today?

The capabilities which AI can provide today are allowing organizations to challenge their ways of working and reveal new possibilities. Not all of these will be relevant to internal audit, but some could be applied across the internal audit lifecycle to evolve and innovate approaches. Example of AI capabilities include:

Sense		Perceive				Learn		Know	
Sense physical data	Sense visual data	See objects	See faces	See actions	Hear voices	Learn by technique	Learn facts and skills	Represent and store knowledge	Retrieve information
Sense light	Sense screen pixels	Detect objects	Detect faces	Detect motion	Convert speech to text	Learn from examples	Learn skills	Populate global knowledge base	Retrieve relevant documents
Sense sound	Sense keystrokes	Classify objects	Recognize faces	Identify actions	Identify speaker	Learn by trial and error	Learn facts	Populate contextual knowledge base	Retrieve relevant answer units
Sense temperature	Sense mouse clicks	Perform OCR	Determine age	<b>Hear sounds</b>	Determine gender from voice	Learn by analysing structure		Maintain truth	Retrieve specific facts
			Determine gender	Recognize sounds	Identify emotion in voice				
			Recognize emotion						



# What Can AI do today?

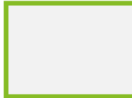
The capabilities which AI can provide today are allowing organizations to challenge their ways of working and reveal new possibilities. Not all of these will be relevant to internal audit, but some could be applied across the internal audit lifecycle to evolve and innovate approaches. Example of AI capabilities include:

Communicate			
Understand language		Understand and generate language	
Classify text	Detect language	Translate languages	Generate narrative
Extract entities	Analyse sentiment in text	Answer questions	Generate image and video captions
Recognise relationships	Analyse emotion in text	Dialogue	
Cluster text	Analyse personality from text	Summarize text	

Plan	Act
Plan production	Act in physical environment
Plan robot motion	Convert text to speech
Plan routes	Move robot limbs
	Act in virtual environment
	Generate mouse clicks & keystrokes
	Generate animated avatar

Create	
Create text	Create videos
Create marketing content	Create custom videos
Create sales content	
Create support content	
Create images	Create speech
Create general images	Create custom voices
Create advertising images	
Create models	Create chemicals
Create 3D models	Create proteins

Reason and solve problems	
Infer	
Make logical inferences	Cluster
Make probabilistic inferences	Recommend
Classify	Predict numeric value
Solve problems	
Search for optimal solution	Optimize
Satisfy constraints	

 Capabilities with most relevance and potential application to internal audit.



# Deloitte's Point of View on the Potential of Generative AI



- Enterprise adoption of AI systems has been growing for a number of years, and during 2023, Generative AI (“GenAI”) has truly captured the imagination of the world, fuelling discussion among businesses and policymakers.
- It is incredibly rare for any emerging technology to achieve these levels of adoption and frequency of usage so rapidly. While initial use was mainly by individuals, Deloitte’s research also found a third (32%) of survey respondents who have used GenAI have done so for work and organisations will soon be investing heavily in enterprise use cases.
- With the rapid acceleration and integration of GenAI into business functions, AI and accordingly GenAI risk management, will continue to be a hot topic for internal audit teams throughout 2024 and beyond.

# AI Maturity in Internal Audit

Most businesses are here

Momentum exists with GenAI to get to here (short term)  
*(do not risk being left behind)*



## Exploring

Navigate traditional technologies to automate existing capabilities/processes. Dabbling with AI.

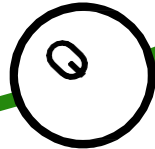
**No meaningful change to the overall organization.**



## Doing

Use AI technologies to augment workforce capabilities. Realizing productivity & efficiency gains.

**Largely the same business, operating, & customer models with targeted enhancements.**



## Scaling

Leverage cross-functional AI applications & platforms to identify synergies/efficiencies. Resulting in transformed ways of working.

**Business begins to adjust to AI as cross-functional opportunities are realized.**

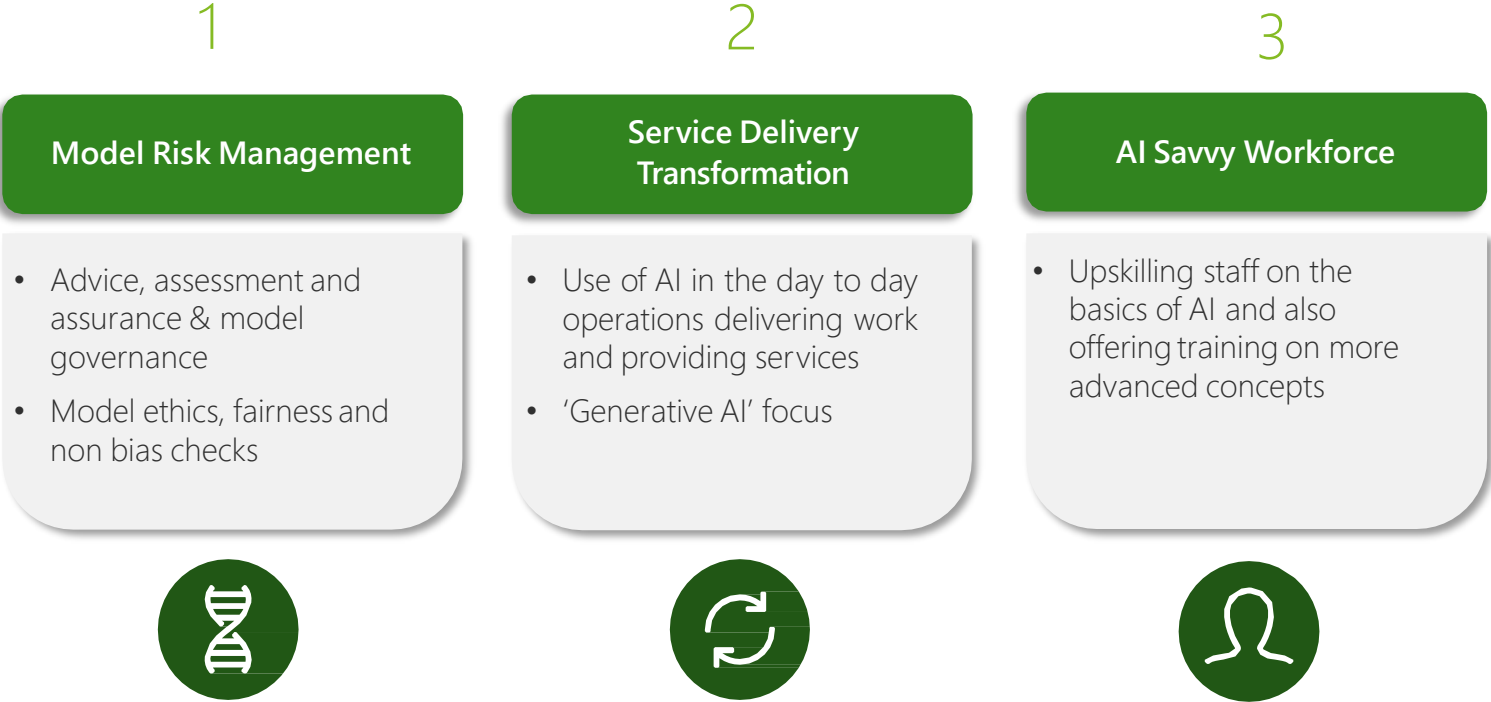


## Disrupting

Optimize AI across the enterprise to realize value in new and meaningful ways. Leading to reimagined operating models & business strategies

**Business is disrupted & evolves in response to rapidly growing opportunities from AI.**

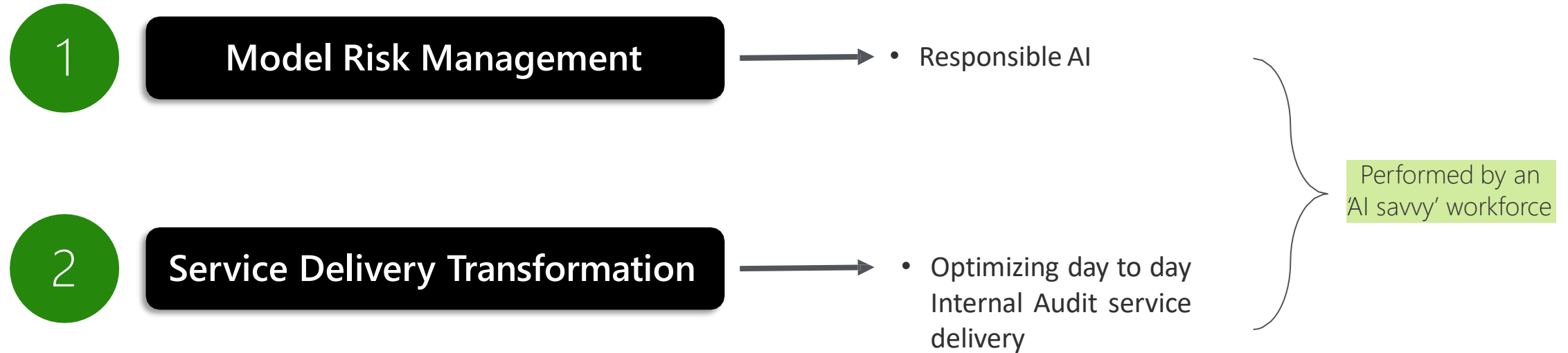
# Internal Audit AI Activation Workstreams





# AI in Internal Audit – Use Cases

# Two Use Cases

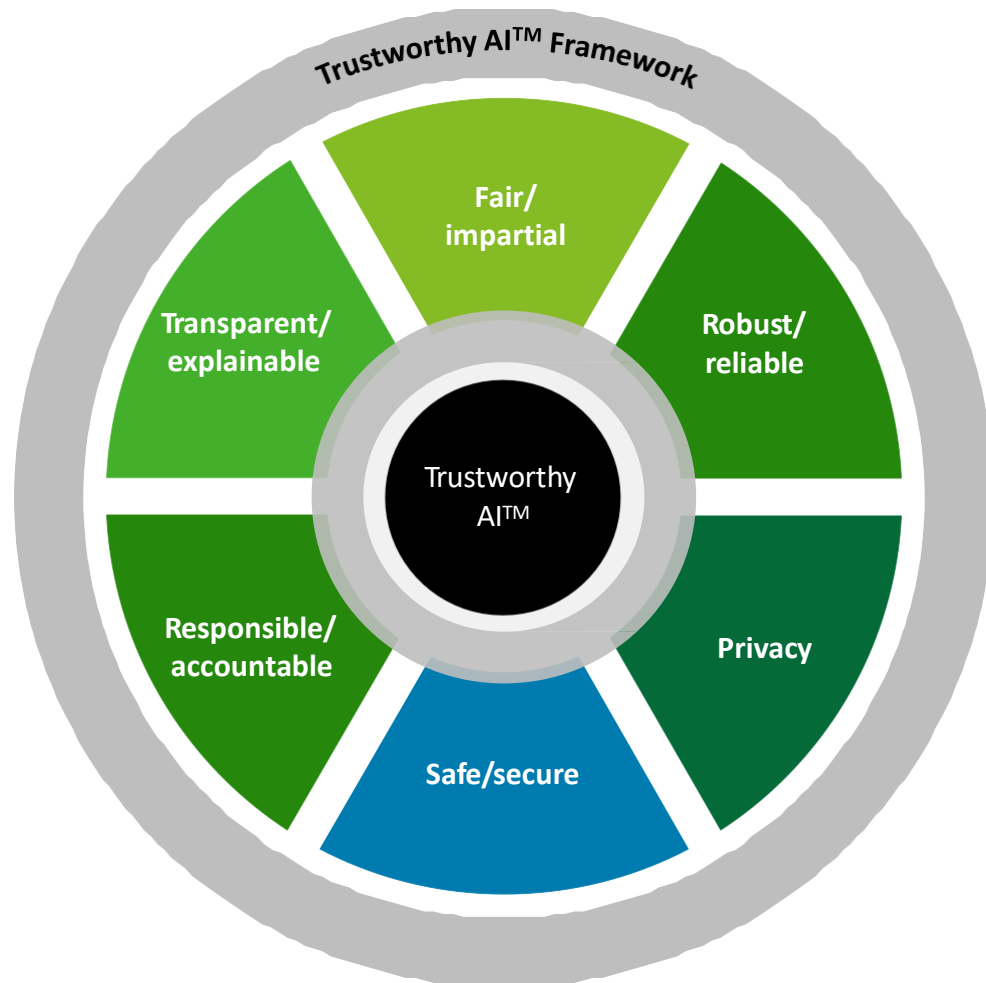




# Model Risk Management

# AI Risk – Trustworthy AI

There is risk with AI. You have to make sure this risk is properly assessed and mitigated. AI model assurance is critical.



## Fair/impartial

AI applications include internal and external checks to help ensure equitable application across all participants

## Robust/reliable

AI systems have the ability to learn from humans and other systems and produce consistent and reliable outputs

## Transparent/explainable

All participants are able to understand how their data is being used and how AI systems make decisions; algorithms, attributes, and correlations are open to inspection

## Privacy

Consumer privacy is respected, and customer data is not used beyond its intended and stated use; consumers are able to opt in/out of sharing their data

## Responsible/accountable

Policies are in place to determine who is held responsible for the output of AI system decisions

## Safe/secure

AI systems can be protected from risks (including cyber) that may cause physical and/or digital harm

# AI Model Governance

Develop and build a structured assurance program that will help you assure AI models.

## AI Strategy, Governance and Operating Model



Provide a strategic cross-functional governance, roadmap and operating model for an effective AI risk management program.

- *Design and implement an AI strategy and framework to be supported by processes and controls over governance, deployment, and monitoring of AI based on our Trustworthy AI framework*
- *Design and implement a strategy for compliance with AI regulations*

*Establishing an AI risk program and operational constructs in alignment with your business strategy and operations*

## AI Data Governance



Establish a data governance and risk management framework to safeguard for the security, privacy, integrity and ethics of data used for AI throughout its lifecycle.

- *Provide recommendations for remediation of data and controls over AI based on Trustworthy AI framework*
- *Assist stakeholders in the development, design and implementation of controls to address AI-specific risks*

*Implementing a data-centric risk approach and framework for managing risks throughout the AI lifecycle*

## AI Risk Management Operations



Build trust and resiliency in AI systems against anomalous activities that could compromise the data, models or outcomes. Develop robust and resilient infrastructure, operations and model development processes.

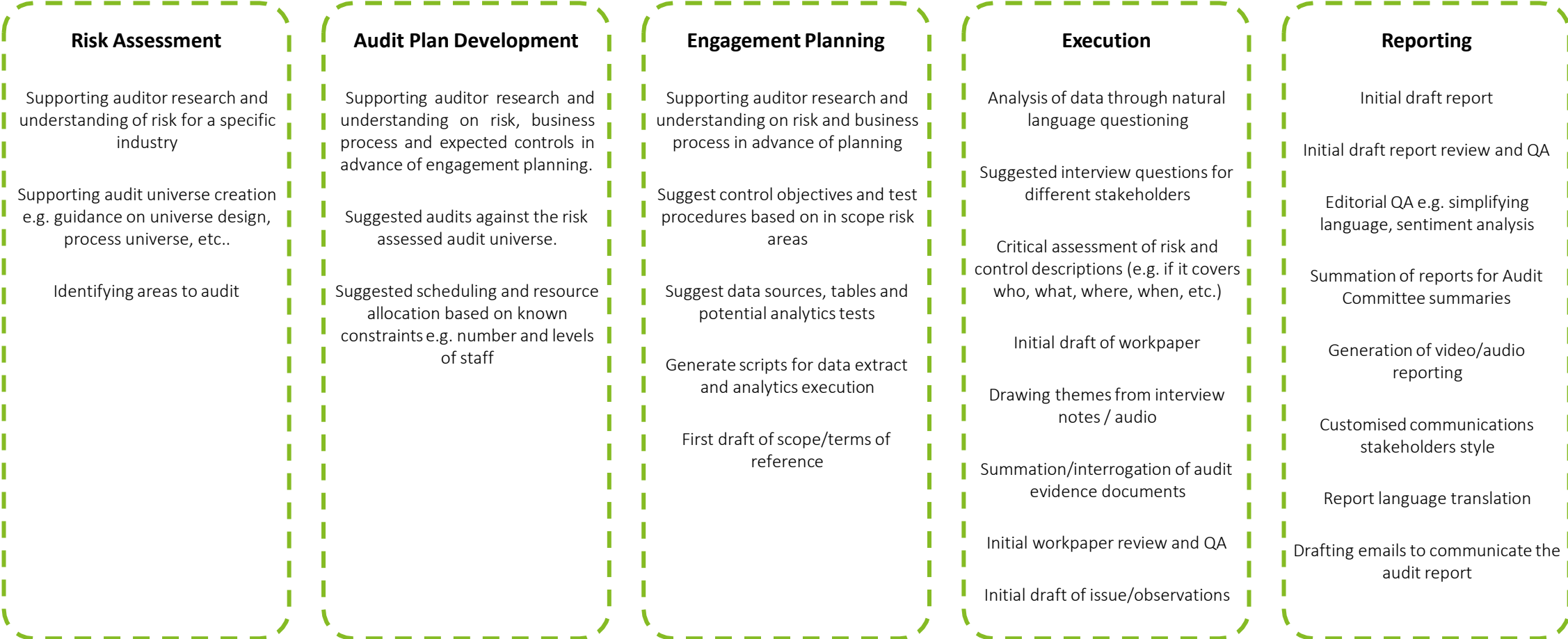
- *Provide independent testing on the design and operating effectiveness of AI controls, findings, and recommendations for deficiencies in the AI environment*
- *Conduct independent testing of AI models and related datasets for potential adverse outcomes*

*Analyzing and improving AI technology and related processes, to promote organizational trust for your AI solutions*

# Service Delivery Transformation

# GenAI for Internal Audit

GenAI can offer a vast range of possibilities for Internal Audit. Listed below are some example use cases of how Internal Audit can be transformed.



# AI Insights from Audit Reports

Mining pooled historical audit reports for insights/trends present a huge opportunity to upgrade internal service and awareness

## Audit reports archive contains rich information

- Audit reports archive contains **trends** in compliance and issues of note
- Pooled audit report across clients can give insights **within an industry and across industries**
- These proprietary data can be a source of **competitive advantage** in terms of service quality and reduce risk

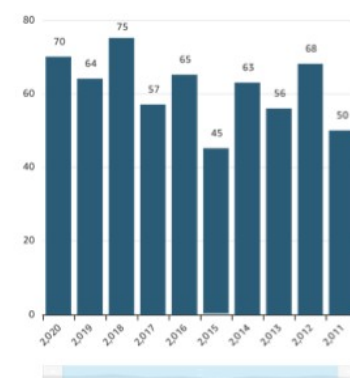
## Challenges in mining audit reports

- The reports are **unstructured**
- Covers multiple audit frameworks
- Non-standardized across different projects and time

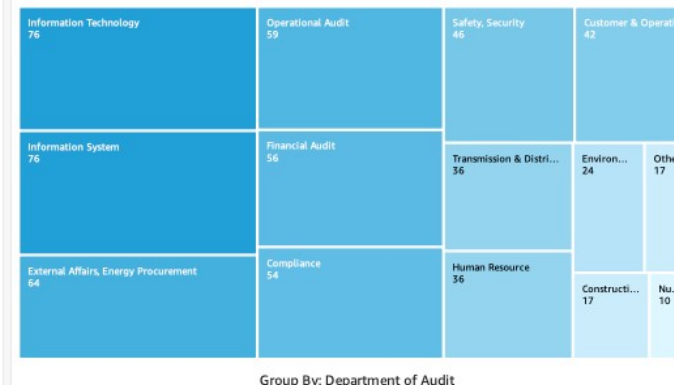
## Opportunities

- Natural language processing** technologies enable information extraction from unstructured data
- Generative AI** (LLMs) reduce the challenges posted by non-standard structure and diverse audit frameworks

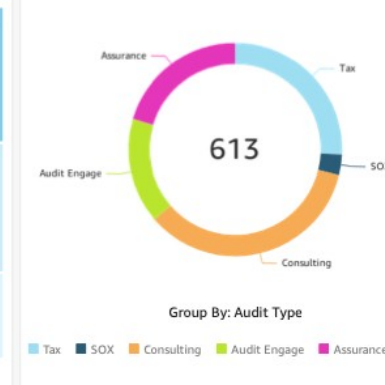
Trend of Audits by Year



Department of Audit



Audit Type



Scope of Audit



Example use case:

- Trends over 600+ reports
- Automated pipeline** to keep dashboard up-to-date
- Dashboard showing issues pertaining to audit client
- Valuable insights** for engagement partners/managers to structure engagement and operations

Audit Report Details

Year	Audit Report Name
2,011	FY2011-101 Validate Calculation Memo-Organizational Unit 1-1-2011 Report.doc
2,011	FY2011-102 Fixed Assets-Cybersecurity Standard 15-1-2011 Report.docx
2,011	FY2011-103 Approval Process-Cyber Risk 16-1-2011 Report.docx
2,011	FY2011-104 Fixed Assets-Environmental Health 26-1-2011 Report.docx
2,011	FY2011-105 Validate Calculation Memo-Energy Procurement 20-1-2011 Report.doc
2,011	FY2011-106 Approval Process-Safety Program 11-1-2011 Report.docx
2,011	FY2011-107 Validate Calculation Memo-Health Safety 22-2-2011 Report.docx
2,011	FY2011-108 Disclosure Controls Engagement-Safety Program 16-2-2011 Report.c
2,011	FY2011-109 Payroll Data Feed Memo-Compliance Program 10-2-2011 Report.doc
2,011	FY2011-110 Fixed Assets-Security Risk 23-1-2011 Report.docx
2,011	FY2011-111 Disclosure Controls Engagement-Evaluate Effectiveness 2-1-2011 Re
2,011	FY2011-112 Disclosure Controls Engagement-Energy Procurement 11-1-2011 Re
2,011	FY2011-113 Employee Services Checking Account-Risk Mitigation 21-2-2011 Re
2,011	FY2011-114 Payroll Data Feed Memo-Operating Effectiveness 12-1-2011 Re
2,011	FY2011-115 Fixed Assets-Information Technology 16-2-2011 Report.docx
2,011	FY2011-116 Payroll Data Feed Memo-Information Security 25-4-2011 Report.doc



# Risk Sensing to Identify Audit Focus

Use GenAI to filter and summarize relevant risk signals for subsequent recommended audit focus

## Risk Events

webhoox news [English] 24-10-2023 3:42 PM

**Clean energy is officially 'unstoppable' now**  
Renewable energy is 'unstoppable' now, says International Energy Agency. Solar panels alone generate more electricity globally than the entire US power sector does today. Demand for coal, oil, and gas is expected to peak this decade. Governments plan to deploy two-thirds more renewable energy by 2030 than they did last year.

First Triggered At 25-10-2023 01:00:00 AM  
Last Triggered At 25-10-2023 03:05:05 AM

Tags: **Greenhouse Gas Emission** | -1.035 | United States Of America | ID

Confidence 1  
Cluster ID 5546334d-8487-4319-8079-5843e6843ab  
Review ID a765a400-d9e-48b4-b421-7ba89f9a292

Proposed tag: **NO TAG** | Analyst Retag: [v] | Release Status: **OK**

**Reasoning [relevant]**  
This event is relevant because it highlights the trend of increasing demand for renewable energy and the shift away from fossil fuels. This trend can impact the regulation and compliance of climate sustainability and carbon emission targets, as well as the proposal to regulate the use of coal, oil, and gas.

No similar events

webhoox news [English] 14-10-2023 3:52 PM

**California wants businesses to disclose their greenhouse gas emissions and climate risks - BOCVIP**  
California wants businesses to disclose their greenhouse gas emissions and climate risks. Mind you, it's not a "wants" it's a "requires by law" You must be [logged in]/https://www.boocvp.com/wp-logout.php?redirect\_to=https://3ANZ2N\_2F:California-wants-businesses-to-disclose-their-greenhouse-gas-emissions.

First Triggered At 15-10-2023 01:00:00 AM  
Last Triggered At 15-10-2023 03:05:05 AM

Tags: **Greenhouse Gas Emission** | -1.281 | United States Of America | ID

Confidence 1  
Cluster ID 59811127a-0a0d-486a-b6af-433a2d5d74b7  
Review ID 028b10df-4848-410f-a6d4-55a55415a0a

Proposed tag: **NO TAG** | Analyst Retag: [v] | Release Status: **OK**

**Reasoning [relevant]**  
The current event in California aligns with the trend of increasing demand for disclosure of greenhouse gas emissions and climate risks by businesses. It is a direct regulation that requires businesses to disclose this information, which can impact the compliance and reporting practices of companies. Therefore, it is labelled as relevant.

**Past similar events**  
Event 1: Amazon sellers and suppliers prepare for a climate change stress test. Amazon recently announced that starting in 2024, suppliers will be required to share emissions data, set emissions goals, and report on their progress. This aligns with the increasing demand from consumers, investors, regulators, and governments for eco-friendly practices. Companies have greater control over their suppliers in addressing indirect emissions, making the supply chain an area of rising pressure and transparency.

globe news [English] 25-10-2023 11:00 AM

**IAEA Chief, PM Modi Strengthen India-IAEA Sectoral Ties**  
IAEA Director General Rafael Mariano Grossi met Prime Minister Narendra Modi in New Delhi. The two leaders discussed ways to foster India-IAEA ties across diverse sectors. India has 19 nuclear reactors producing about 3 per cent of its electricity. India is currently the world's second-largest domestic builder of nuclear power plants.

First Triggered At 25-10-2023 04:00:00 PM  
Last Triggered At 25-10-2023 06:04:53 PM

Tags: **Greenhouse Gas Emission** | -1.072 | India | ID

Confidence 1  
Cluster ID 5762e05-1e4d-45e6-4708-d3008718e939  
Review ID a0d111b-4755-4b7a-ba15-8956a763d7c

Proposed tag: **NO TAG** | Analyst Retag: [v] | Release Status: **OK**

**Reasoning [irrelevant]**  
This event is irrelevant as it does not directly or indirectly impact the regulation and compliance or trend of proposal to the regulation on climate changes, climate sustainability, global warming, carbon market, carbon emission, or carbon capture in the near term.

No similar events

- Signals sensed from dynamic risk sensing need to be reviewed to remove noise
- Labor intensive due to **large volume, high cadence data** (1000s of signals/day)
- Gen AI review automation:
  - Include **subjective context**
  - **High reliability** when used together with ML models

Large Language Model



## Generate Trends & Audit Focus Recommendations

Read and aggregate the trends highlighted in the article. Explain key emerging risks that could be relevant to a operator of a data center operating in Australia, Indonesia and Korea.

From the article, the following trends emerge in relation to carbon credits and climate mitigation investments for a regional data centre operator in Asia Pacific:

- Credibility of Carbon Credit Projects:**
  - There's an increasing focus on the genuine effectiveness of carbon credit projects.
  - Ensuring the reliability of these projects is essential to confirm their true contribution to emission reductions.
- Participation in Carbon Credit Markets:**
  - Engagement in carbon credit markets is not just about offsetting emissions, but also about revenue generation through the sale of carbon credits.
  - It's imperative to have a deep understanding of market dynamics due to potential volatilities.
- International Commitments on Climate Change:**
  - Major global players are reinforcing their commitments to address climate change.
  - This can result in tighter regulations which companies will have to adhere to.
- Role of Oil and Gas Companies:** ●

# Generate Controls & Test Plan

Produce control objectives and test plans

Audit Scope	
<b>A: Privacy Program Governance</b>	
1.	Privacy Governance Structure
2.	Privacy by Design/Default and Data Protection Impact Assessment (DPIA) program
3.	Roles & Responsibilities
4.	Privacy & Data Protection Requirements and Controls
<b>B: Privacy Program Policies and Procedures</b>	
1.	Privacy and information security policies, procedures and standards
2.	Privacy notices and consent mechanisms
3.	Security for privacy
4.	Records of processing activities architecture (location of personal data, access to personal data, use of third party personal data, third party access to <Client Name>' personal data, personal data
5.	Data subject access rights process and capabilities to support requests
6.	Privacy incident response program (i.e. breach management and notification)
<b>C: Training and Awareness</b>	
1.	Privacy and information security training and awareness curriculum
<b>D: Third Party and Cross border Data Transfer</b>	
1.	Third party/vendor management processes, contracts and due diligence
2.	Cross border data transfer mechanisms in use
3.	Jurisdictional localization of GDPR privacy program elements

## Input Context:

- Company profile
- Industry
- Audit scope

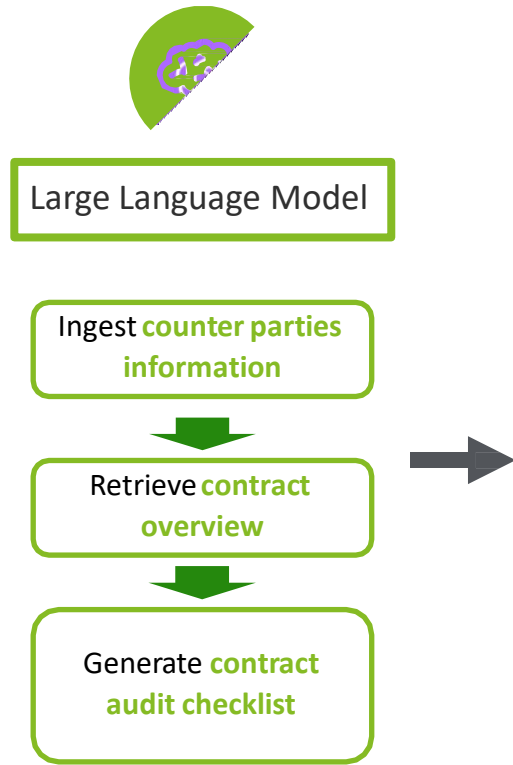
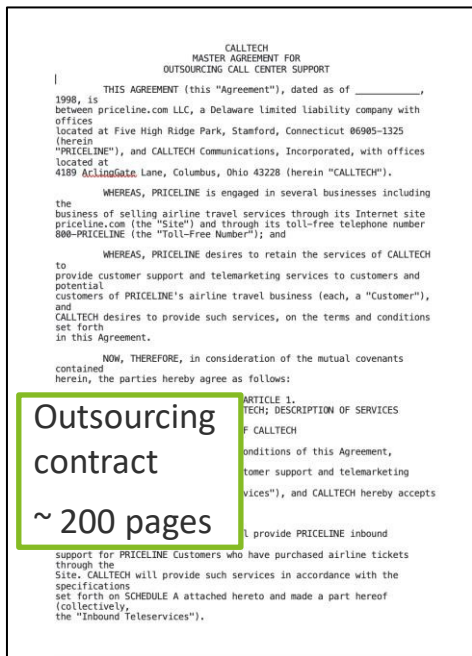


Audit Scope Ref	Audit Scope Description	Control Objective	Risks	Test Plan
A1	1.Privacy Governance Structure	(Chapter I, Article 5) Company A ensures that personal data is processed lawfully, fairly, and transparently.	Without a clear governance structure, there's an increased likelihood of non-compliance with GDPR.	1. Review the organizational chart or other documentation detailing the privacy governance structure.
			2. Conduct interviews with key personnel to understand their roles and responsibilities related to GDPR.	
A2	2.Privacy by Design/Default and Data Protection Impact Assessment (DPIA) program	(Chapter IV, Section 3		

# Identify Risk & Audit Action Plans from Documents

Use GenAI to mine documents (e.g. contracts) to develop audit check lists and action plans

## Outsourcing Contract



## Audit Checklist

When assessing the terms of a call center outsourcing agreement, especially for an online travel agency (OTA) that sells airline travel services through a website, it's important to consider the nuances and implications that could affect the operations and reputation of the OTA's site. Here's a checklist to assess the terms, identify any imbalance of benefit, and recognize potential risks to the "Site":

- Scope of Services:**
  - Are the services CALLTECH is providing clearly defined?
  - Are there any limitations or exclusions?
- Service Levels and Performance Metrics:**
  - Are there clearly defined service levels that CALLTECH must adhere to?
  - What performance metrics will be used to measure CALLTECH's service quality?
  - Are there any penalties for failing to meet these metrics?
- Data Protection and Privacy:**
  - How will CALLTECH handle customer data?
  - Are there assurances in place to ensure the protection of customer data?
  - What measures are in place to ensure compliance with data protection and privacy laws?
- Customer Interaction:**
  - What training will CALLTECH agents receive about the OTA's services, offerings, and brand values?
  - Are there guidelines on how CALLTECH should communicate and represent

## Contract Audit Report & Action Plans

Certainly! Service levels and performance metrics are crucial to maintaining quality and ensuring that the outsourced call center meets the expectations of the online travel agency (OTA). Here's a detailed point-by-point checklist for item no. 2, "Service Levels and Performance Metrics":

- Definition of Service Levels:**
  - Are service levels specifically defined for each type of interaction (e.g., inquiries, complaints, bookings)?
  - Is there a clear distinction between different levels of service priorities (e.g., general queries vs. emergency support)?
- Response and Resolution Times:**
  - What is the expected response time for answering calls or other inquiries?
  - What is the targeted resolution time for customer complaints or issues?
  - Are there separate resolution times for different issue types (e.g., refund requests vs. itinerary changes)?
- Call Abandonment Rates:**
  - What is the maximum acceptable call abandonment rate?
  - Are there measures in place to minimize dropped or abandoned calls?
- First Call Resolution (FCR):**
  - Is there a target for resolving customer issues during the first call?
  - How is FCR measured and tracked?
- Call Handling Time:**
  - What is the average expected call

# AI Savvy Workforce

# Purple People

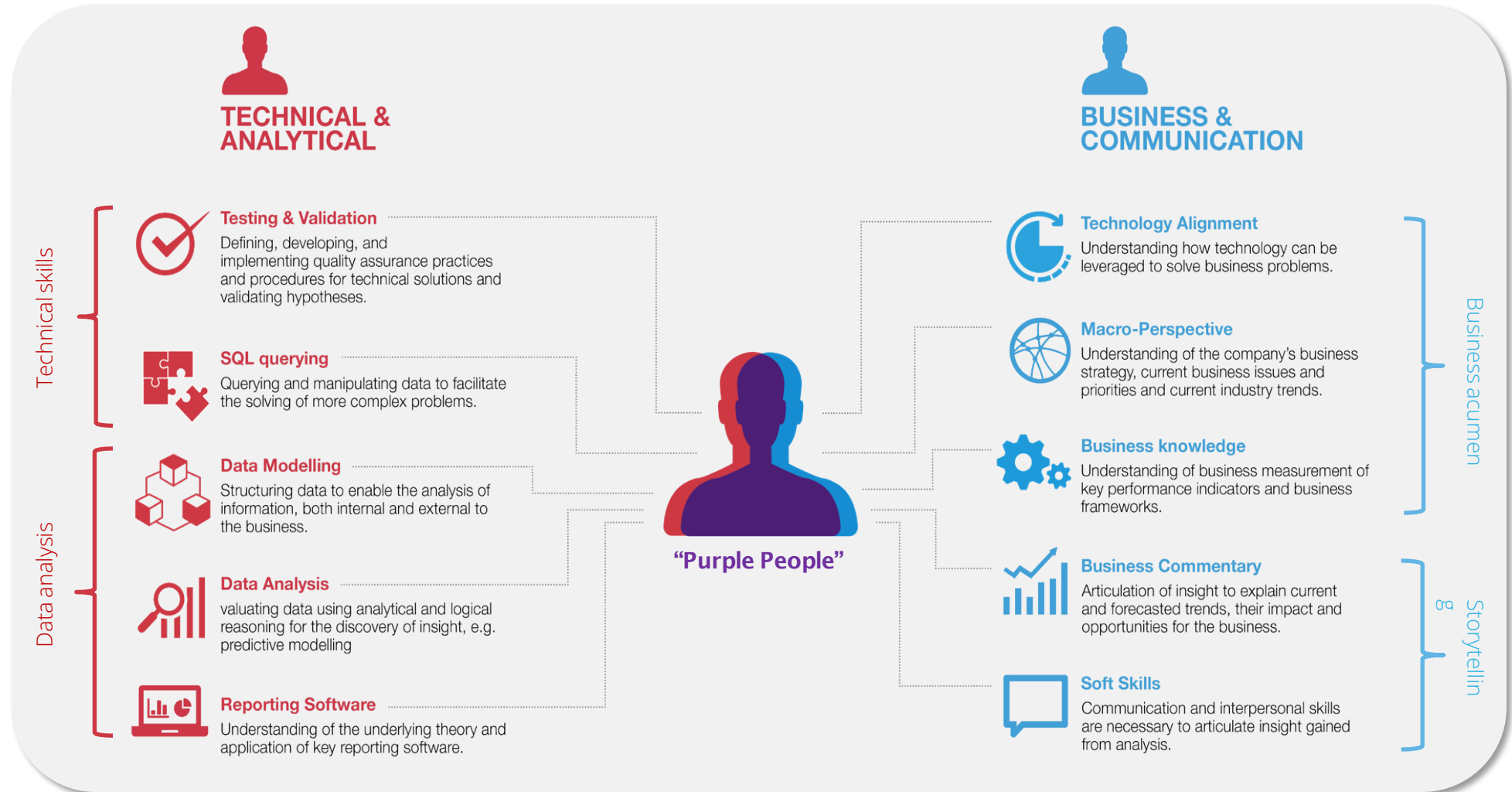


## "PURPLE SKILLS"

Business skills supplemented by core technical understanding.

IA staff do not need to be AI technical experts but business savvy and know the 'right questions to be asked'.

Train and educate your people in AI.

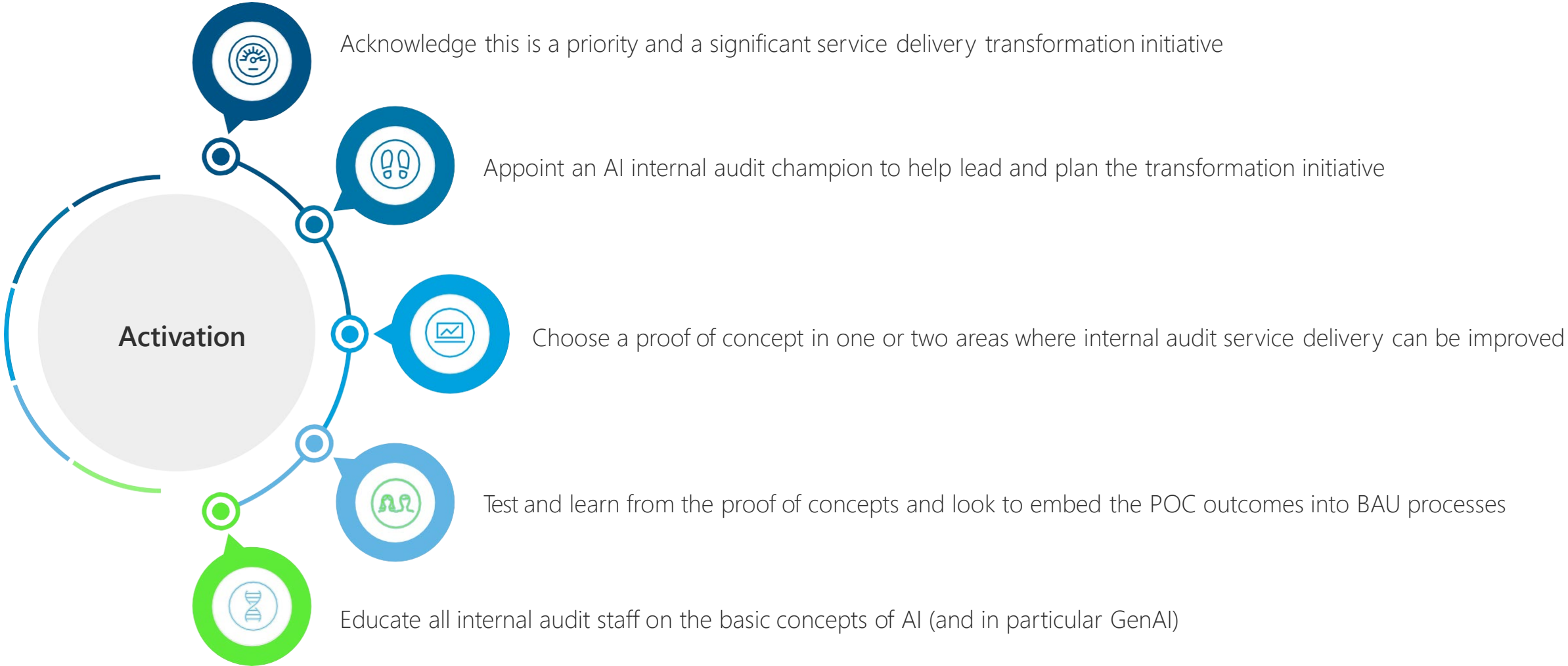




# Activation



# Activating AI in Internal Audit





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