



AI in Government Sector

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AI in Government sector

Trends, opportunities and challenges



GOVERNMENT SECTOR – TRENDS, OPPORTUNITIES AND CHALLENGES

AI- and cloud-led public services enable citizen-centric scale; while trust, inclusion, security, and governance emerge as constraints

Key Trends Reshaping Government	Prevalent Opportunities	Related Challenges
<p>Citizen-centric digital public services Smart Nation 2.0 is shifting government from digital forms to end-to-end, life-event-based services that prioritise trust, inclusion, and user experience.</p>	<p>Hyper-personalised citizen engagement AI can proactively guide citizens through bundled services and life-events using trusted identity, consented data, and contextual assistance</p>	<p>Trust and explainability gaps AI-augmented decisions risk eroding public trust without strong explainability, audit trails, and human-in-the-loop controls.</p>
<p>AI mainstreaming across government Under NAIS 2.0, AI adoption is moving decisively from pilots to production use across policy, operations, and frontline service delivery</p>	<p>Productivity-augmented public officers Secure copilots can materially improve officer productivity through summarisation, drafting, analytics, and policy intelligence.</p>	<p>Digital inclusion and equity risk Default-digital AI services may disadvantage seniors or vulnerable groups if accessibility and assisted channels lag</p>
<p>Cloud-first government platforms Widespread adoption of Government on Commercial Cloud (GCC) is standardising, scaling, and accelerating digital and AI service deployment.</p>	<p>AI-driven government operations Cloud-native AI enables AIOps, predictive maintenance, and demand forecasting across government digital services.</p>	<p>Cyber and AI attack surface AI both strengthens defenders and amplifies attackers, increasing exposure to phishing, model abuse, and supply-chain threats</p>
<p>Interoperable data-driven governance Government is strengthening API-led data sharing and open data infrastructure to enable faster, evidence-based policymaking.</p>	<p>Intelligent policy and insights AI can synthesise multi-agency datasets to surface early signals, automate eligibility decisions, and simulate policy outcomes</p>	<p>Data privacy and purpose creep Cross-agency AI use heightens risks around consent, PDPA compliance, and unintended reuse of sensitive data</p>
<p>Trust-by-design digital government Cybersecurity, online safety, and responsible AI governance have become foundational enablers rather than secondary controls</p>	<p>Scalable trusted AI ecosystem Singapore’s AI governance tooling enables faster deployment of GenAI with built-in testing, assurance, and accountability.</p>	<p>Governance at AI speed Traditional public-sector governance struggles to keep pace with fast-evolving GenAI capabilities and deployment cycles.</p>

GOVERNMENT SECTOR (EDUCATION / ACADEMIA SEGMENT) – TRENDS, OPPORTUNITIES AND CHALLENGES

National-scale AI platforms transforming education from fragmented pilots into a foundation for learning outcomes, workforce readiness, and trust

Key Trends Reshaping Academia	Prevalent Opportunities	Related Challenges
System-wide AI integration Embedding AI into national education infrastructure, with SLS(a) serving as single platform across all public schools rather than relying on fragmented pilots.	Scalable and consistent deployment A single national platform enables rapid, uniform rollout of AI tools across all public schools, ensuring curriculum alignment, consistent quality, and lower marginal deployment costs.	Increased platform dependency Heavy reliance on a single government platform may limit speed of innovation and flexibility for niche pedagogies.
AI-enabled personalized learning Deploying AI to personalize learning pathways, grading, and feedback through adaptive learning systems and AI feedback assistants.	Improved learning outcomes AI personalization enables early learning-gap detection and targeted interventions while maintaining curriculum consistency.	Risk of over-scaffolding Excessive reliance on AI-generated hints, and feedback can reduce critical thinking, and independent problem-solving.
Teaching-centric AI adoption model Positioning AI as a teacher augmentation tool, automating lesson preparation, grading, and data analysis to improve efficiency.	Increased efficiency in teachers AI automation of lesson planning, marking, and analytics may increase efficiency in teachers and lead to higher-value pedagogy.	Continuous requirement of reskilling Teachers may require continuous reskilling to interpret AI outputs effectively; uneven digital confidence could initially increase workload or create inconsistent classroom adoption.
Age-appropriate AI governance Embedding responsible-by-design AI governance into education through a dedicated AI-in-Education Ethics Framework and phased, age-appropriate deployment with guardrails.	High trust and societal acceptance of AI Responsible-by-design governance, ethics frameworks, and phased exposure strengthen parental trust, protect students, and reduce risk in AI adoption.	Delayed open-ended AI tools exposure Guardrails may delay students' familiarity with broadly used generative AI tools compared with peers in less regulated systems.
Education as a pillar of National AI Strategy Positioning government schools as a pipeline for AI literacy and talent development as education is a priority sector under National AI Strategy 2.0.	Long-term AI talent Positioning education as a priority AI sector builds foundational AI literacy nationally, supporting future workforce readiness.	Outcome not quantifiable in short span AI outcomes emerge gradually, limiting the ability to clearly quantify short-term returns or workforce linkages.

Notes: (a) Student Learning Space

 Sources: "Artificial intelligence in education", Ministry of Education Singapore, [Link](#); "SLS as a key enabler of EdTech Masterplan 2030", Singapore Student Learning Space, [Link](#); "AI in education: Transforming Singapore's education system with student learning space", Government Technology Agency of Singapore, [Link](#); other secondary sources; all accessed in Apr 2026

PREVALENT AI THEMES IN GOVERNMENT SECTOR

Public sector enterprises are using AI to trim costs, scale citizen services, and fast-track digital transformation

Key themes in market



Cost reduction in core government operations

Applying AI particularly in high-volume administrative processes such as case processing can help governments save the budget

- GovTech's OneService Chatbot has been operating since 2021 and handles ~30,000 cases per month, using AI to extract case details, predict case category, and auto-route to relevant agencies



Expansion of AI-driven citizen engagement solutions

AI-powered chatbots and virtual assistants are widely adopted to provide 24/7 support to citizens, deliver instant responses to service requests, and improve accessibility of public services

- Ask Jamie has been deployed widely across government sites, and a case study cites it has answered more than 15.0 mn citizen questions since launch and achieved up to 50% call deflection (reduction in contact centre enquiries)



Strong investments in digital transformation programs

The market is supported by increasing public sector investments in digital transformation and AI research. Governments are prioritizing AI to build data-driven governance models

- SmartCitiesWorld reports Singapore planned ~S\$3.3bn government ICT spending in FY2023, with >30.0% (~S\$1.0bn) for applications developed on the Government Commercial Cloud (GCC)

Future imperatives for players

- Move from pilots to enterprise-wide AI deployment in case intake, validation, routing, and decision support
- Combine AI + workflow automation + RPA to eliminate manual handoffs
- Invest in clean, unified, and interoperable data layers across agencies
- Enable AI assistants to complete end-to-end services (applications, status checks, payments), not just answer queries
- Deploy AI consistently across web portals, mobile apps, messaging platforms, and voice channels
- Accelerate migration to secure government clouds optimized for AI workloads
- Embed AI and analytics into policy formulation, scenario modeling, and impact assessment

PREVALENT AI THEMES IN EDUCATION / ACADEMIA SEGMENT

Nationwide AI integration in education combining curriculum reform, inclusive learning, and public-private partnerships

Key themes in market

Future imperatives for players



Integration of AI into national curriculum

Government-led integration of AI across formal education, with curriculum-aligned deployment from primary to tertiary levels and a structured ethical framework for classroom use

- In Apr 2026, NTU announced that AI literacy will become mandatory for all undergraduates from Aug 2026, supported by free access to Google's premium AI tools

- Institutes must go beyond offering AI tools and hard-wire AI literacy into core curricula across disciplines
- Institutes must operationalize ethical AI use within classrooms



Inclusive and differentiated education enabled by AI

Beyond universities and schools, AI is also being applied to support students with special educational needs, enabling teachers to better personalize instruction

- As reported by the Straits Times in Mar 2026, the Dyslexia Association of Singapore (DAS) leverages AI to personalize learning materials and support educators in addressing diverse learning needs

- Shift from ad-hoc interventions to systematically embedding AI-supported differentiation for vulnerable learners
- Re-orient teacher roles toward coaching and professional judgment to better support diverse and special educational needs



Public-private investment in AI education and skill development

Major technology players are partnering with the Singapore government to invest heavily in AI infrastructure and nationwide upskilling programs, supporting tertiary students, educators, and nonprofits to strengthen the country's long-term AI talent pipeline

- In Apr 2026, Microsoft announced ~S\$7.0 bn(a) (US\$5.5 bn) spend and launched new Microsoft Elevate programs to support Singapore's AI education ecosystem until end of 2029

- Partnerships must support sustained talent development
- Scale educator readiness and equitable student access, while anchoring AI deployment within public-sector governance

Notes: (a) 1 USD = SGD 1.2693 as per OANDA rate of conversion on 19 Apr 2026

Sources: "AI literacy mandatory for all NTU students from August as school rolls out free Google AI tools", The Straits Times, [Link](#); "Forum: AI can personalise education for those who learn differently", The Straits Times, [Link](#); "Microsoft announces \$5.5 billion spend and new Microsoft Elevate programs to support every tertiary student, educator and nonprofit to power Singapore's AI future", Microsoft, [Link](#); other secondary sources; all accessed in Apr 2026

CHALLENGES AND OPPORTUNITIES – GOVERNMENT

AI drives efficiency and public safety gains, but scale is constrained by cybersecurity, legacy systems, and budgets

Tailwinds in AI adoption



Automated Data Mapping and Intake

AI streamlines document processing by extracting, translating, and structuring unstructured data, delivering faster, more accurate outcomes and freeing staff for judgment-based work

- **AISAY is Singapore govt AI powered document analysis platform** to automatically classify, extract, and validate documents submitted to government agencies, **enabling faster routing into downstream workflows**



Predictive Analytics for Public Safety and Infrastructure

Governments are investing in AI-based predictive systems to anticipate congestion, incidents, crime hotspots, and infrastructure failures.

- **LTA's CRUISE initiative introduces AI predictive traffic management** beyond adaptive signaling

>90,000

police cameras deployed across Singapore have **supported the solving of 5,000+ criminal cases since 2012 and contributed to a crime reduction of over 50% in some public areas**, with plans underway to expand the network to more than **200,000 cameras by 2030**

Headwinds in AI adoption



Increased Risk of Data Breaches and Cybersecurity Threats

- AI adoption in government expands the cyber attack surface, increasing risks of data breaches, service disruptions, and security failures
- **IBM warns that weak AI governance can introduce new vulnerabilities** threatening public trust and national security

1.5mn

patient records were exposed in **Singapore's 2018 SingHealth cyberattack**, including the Prime Minister's data highlighting escalating cybersecurity risks amid rapid digitalization



Legacy Infrastructure and System Integration

- AI deployment requires significant upfront investments in infrastructure, cloud services, data preparation
- **Budget constraints and ROI uncertainty are limiting factors**, particularly for smaller or resource-constrained government entities
 - Singapore **committed ~\$743.0 million over five years** to AI under NAIS 2.0

CHALLENGES AND OPPORTUNITIES – EDUCATION / ACADEMIA SEGMENT

AI strengthens teaching effectiveness and investment support, though adoption depth and governance risks continue to challenge scalability

Tailwinds in AI adoption



Enhanced teacher efficiency and shift towards higher-value teaching

AI reduces time spent on administrative tasks allowing teachers to focus more on pedagogy, student engagement, and targeted support

- 82% of Singapore teachers reported that AI helps improve lesson planning, and 74% agreed that it automates administrative tasks



Strong funding ecosystem enabling educational support

Despite tight regulatory controls in public schools, Government offers multiple national funding schemes enabling schools/individuals to adopt new tools

- Government provides S\$230–S\$290 under Edusave account to primary or secondary school students for personal learning devices, enrichment programs, etc.
- In Mar 2026, the government rolled out six months of free premium AI tool subscriptions for participants in selected SkillsFuture AI courses



75% teachers use AI in education in Singapore to teach and support student learning



~20% of online courses in Singapore use some forms of Artificial Intelligence

Headwinds in AI adoption



Data governance, student privacy, and ethical use at national scale

Need for personalization requires handling sensitive student data, necessitating stringent safeguards to maintain public trust and comply with government AI governance standards

- Parental and public concerns remain significant, with AI introduced gradually from Primary 4 under strict guardrails, reflecting caution around data exposure and misuse



201 Incidents of data leaks rising by 10% within the public sector in 2023



Legacy Infrastructure and System Integration

While AI usage is high, depth of capability varies, especially in supporting vulnerable learners, creating risks of uneven educational outcomes

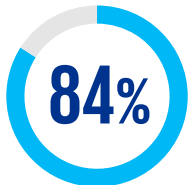
- Despite 75% overall AI adoption, only 16% of lower secondary teachers use AI to support students with special educational needs, highlighting gaps in applied capability rather than access
- Teachers were reported working ~47 hours a week, suggesting that AI is redistributing effort rather than reducing workloads in the near term and raising questions around immediate ROI

KPMG GOVERNMENT SECTOR PUBLICATIONS – KEY FINDINGS

Recent KPMG publications highlight high AI optimism in government, but execution and operating-model gaps are slowing scale

~8 in 10

Government respondents say they are embedding AI agents into workflows, products, services, and value streams



Respondents expect AI to shift from an efficiency enabler to a strategic innovation enabler within the next year

Top AI risks faced by public sector today	1	2	3
	Deepfakes or synthetic content	Regulatory and compliance risks	Cyber attacks
Top AI risks faced by public sector in 2 yrs	1	2	3
	Spiralling costs	Regulatory and compliance risks	Insider risks

79% Believe AI will give governments a significant advantage

63% have been using AI for less than two years

Operating models are proving to be a major inhibitor to widescale adoption

56%
State that their operating model enables AI strategy alignment

23%
Say their operating model enables this consistently

16% State that leaders fully trust AI, only 12 percent state that AI is integral to their organization, and only 18% have integrated AI into their 5-year plans

Note(s): 1. Key findings of the survey, based on responses from 115 government leaders, executives and technology decision-makers around the world; 2. key findings of the survey, based on responses from 184 senior AI leaders of 16 different government functions
Sources: 'KPMG Global tech report 2026: Government and public sector', KPMG, [Link](#); 'Intelligent government', KPMG, [Link](#) all accessed in Mar 2026



AI CASE STUDIES BY SECTOR – AI IN GOVERNMENT (1/2)

KPMG enabled California’s health insurance marketplace to handle peak enrollment at scale by using AI

KPMG in the US enabled California’s state health insurance marketplace to deploy an AI-powered virtual assistant, improving citizen service, reducing enrollment call-center pressure, and enabling scalable, always-on digital support during peak enrollment periods

Client challenge

KPMG in the US’s client, **Covered California**, is a state-run insurance marketplace serving over 2.0 million residents, facing highly variable demand, especially during annual open-enrollment periods

The client faced significant operational challenges during enrollment seasons, including:

- High call volumes near enrollment deadlines
- Long wait times impacting citizen experience
- Dependence on temporary, seasonal call-center staff

Leadership needed a way to reduce call center dependency, scale support without increasing headcount, and deliver 24/7 assistance to residents and enrollment partners, while maintaining service quality



Our approach

KPMG deployed a cross-functional team spanning AI automation, healthcare, government, and customer experience to deliver a tailored AI-enabled solution

Key elements of the approach included

- 1 Built and deployed CiCi, an AI virtual assistant for the 2019 open enrollment
- 2 Implemented on Microsoft Cortana and Cloud, integrated with core backend systems
- 3 Used NLP to interpret user intent and deliver accurate responses
- 4 Provided bilingual (English/Spanish) support across 90+ common queries

Enabled analytics from chatbot interactions to capture user intent, satisfaction, and service gaps, improving digital decision-making

Value delivered

Through KPMG in the US’s AI-led intervention, the client achieved measurable improvements in both operational efficiency and citizen experience

- Reduced call center workload during peak enrollment, limiting the need for seasonal staffing
- 24/7 always-on digital support for residents, especially during deadline-driven surges
- Shorter wait times and improved citizen experience, particularly for common and repetitive inquiries
- Improved service accessibility, with multilingual support and an additional digital assistance channel
- A scalable AI foundation to support future use cases across enrollment, service delivery, and digital government initiatives

Why KPMG?

- Expertise in AI-enabled transformation for government and healthcare, translating complex AI risks into practical, governed solutions
- End-to-end approach combining strategy, solution design, and hands-on AI implementation

What we have learned

- Proactive AI governance is essential for trusted, large-scale citizen services
- Leadership education and an AI-aware culture are critical for managing AI risks
- Understanding the full AI lifecycle enables more secure, scalable, and tailored solutions



AI CASE STUDIES BY SECTOR – AI IN GOVERNMENT (2/2)

LLM Penetration Testing for Government Agency

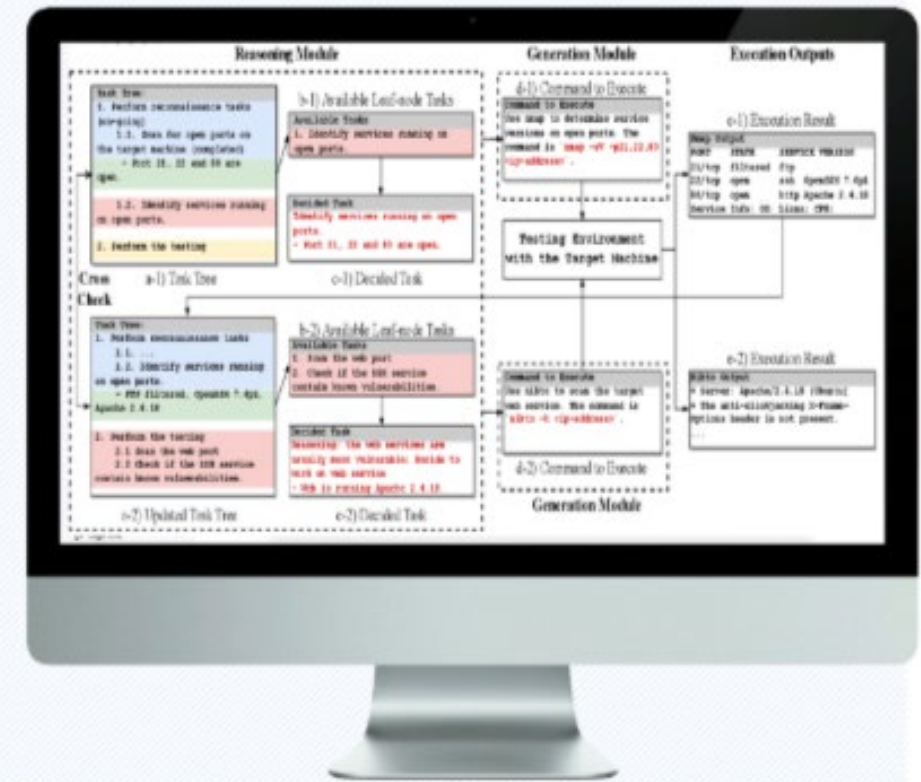
Client challenge

KPMG was engaged to perform a comprehensive Vulnerability Assessment and Penetration Testing (VAPT) on an internal application developed by a government agency

- The application leverages Large Language Model (LLM) technology to process user-uploaded databases and facilitate complex querying capabilities
- The primary objective was to assess the application's security posture against a broad range of LLM-specific threats while ensuring its ability to securely manage sensitive data

What we did

- KPMG employed a variety of tailored methodologies to assess LLM-based environments. These included prompt injection testing to evaluate the system's resistance to manipulative queries, and data exfiltration simulations designed to identify potential leakage of sensitive or unintended information
- One such technique was exploiting excessive agency within the LLM application, which allowed KPMG to manipulate its behavior, forcing the LLM to delete or alter read-only user-uploaded databases stored in the system
- KPMG successfully demonstrated the effectiveness of prompt injection attacks by leveraging context switching techniques to manipulate the LLM into performing unintended activities. These include providing users with recipes for creating dangerous or illicit substances, which the model should have otherwise restricted.
- To tackle these vulnerabilities KPMG provided actionable recommendations based on stringent testing





AI in Government sector

KPMG AI proposition and key differentiators

The KPMG Trusted AI Centre of Excellence

AI that deliver results, not just pilots.

Most organisations can launch AI pilots.
Very few manage to scale them.
The KPMG Trusted AI CoE exists to fix that.

What we do

We help organisations design, build, and scale AI that:

- Solves real business problems
- Is trusted by leaders, employees, and regulators
- Can be adopted and scaled across the organisation
- Enables intelligent governance, decision-making and operations

The result

AI that people trust, use, and rely on,
that leaders can see, measure, and defend.

Contact us



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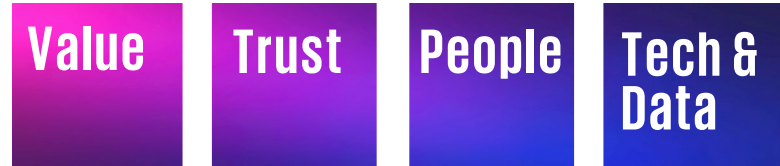


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What makes our AI CoE different

KPMG Four-Door Framework

A structured way to scale AI across the enterprise



VALUE

Turn AI activity into real business impact and ROI.

TRUST

Build AI that's trusted by everyone, from the start.

PEOPLE

Design AI around how people work, so adoption sticks.

TECH & DATA

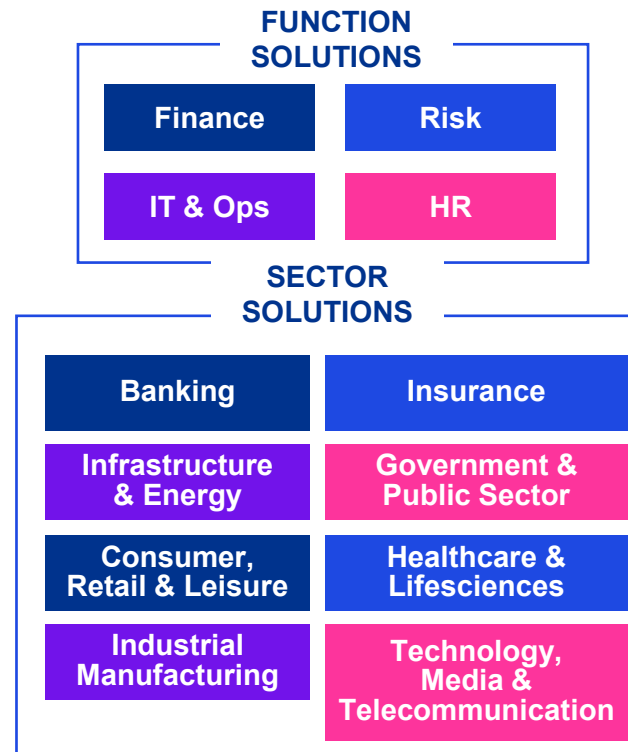
Enable AI to scale with the right technology foundation

Trusted ecosystem

KPMG brings together a powerful ecosystem of partners (leading technology companies, academia, industry organisations, and government agencies) to help turn AI ideas into tangible innovative solutions.

Co-creation of solutions

with you, for you in your function and sector



Support from EDB

With grants for

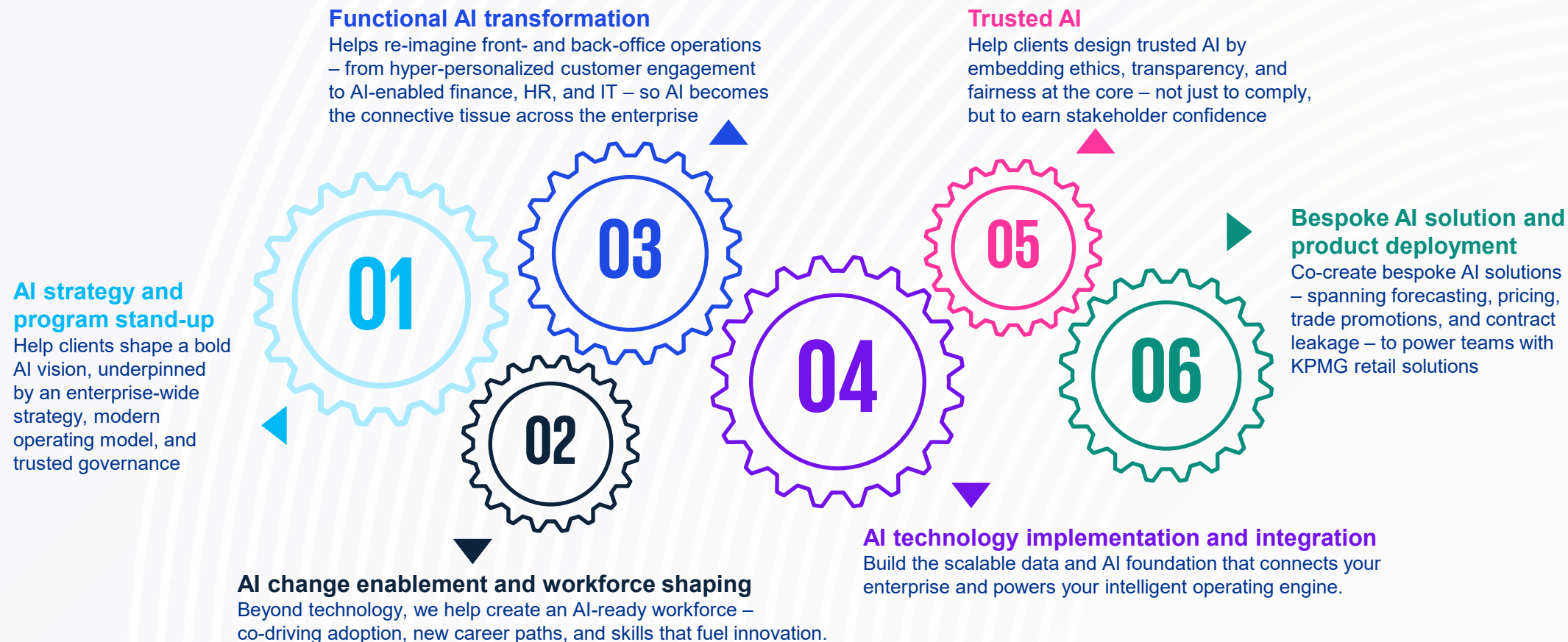
- Solution Design & Rapid Prototyping
- PoC/Pilot Build

Speed to market

- Faster time to market, going from idea to POC to scaled deployment
- Access to proven, reusable AI solutions and accelerators

HOW KPMG CAN HELP (1/2)

Driving enterprise-wide AI impact by combining strategy, technology, workforce, and trust



HOW KPMG CAN HELP (2/2)

KPMG can help clients across their AI journeys



Develop a transformational AI strategy

Define your AI goals, identify opportunities and risks, and create a tailored strategy and execution plan. Build a business case with clear metrics to secure investments and ensure measurable success by scaling AI for enterprise-wide impact and building lasting capabilities.



Ensure AI trust and compliance

Scaling AI introduces complexities and risks. KPMG Trusted AI teams can help ensure your AI solutions are ethical, secure and compliant. Our Trusted AI Framework, built on 10 ethical pillars, empowers organizations to boldly deploy AI responsibly, transparently and with confidence.



Empower your workforce with AI

KPMG AI-enabled Workforce solutions deliver personalized adoption and upskilling experiences, helping your team embrace generative AI and infuse it into everyday work.



Build a sustainable AI technology infrastructure

Leverage KPMG professionals' experience to integrate AI frameworks, platforms and accelerators, helping you ensure your technology infrastructure is ready to scale AI initiatives.

KPMG GOVERNMENT SECTOR CREDENTIALS

KPMG AI-assisted Internal Audit Management

- Ready for deployment
- Under development/ finetuning stage



AI-assisted Internal Audit Management is a suite of GenAI-powered audit solutions developed by KPMG to enhance and streamline activities across the internal audit lifecycle. Below is a repository of KPMG AI-assisted internal audit management tools:



1 **AI-driven Risk Assessment**
Leverages AI to analyse past audit findings, recurring control failures, and audit reports to recommend high risk areas across audit universe

2 **Smart Audit Planning Assistant**
Uses AI to recommend audit scope and key controls based on risk assessment outcomes and emerging risks, enabling a dynamic, risk-aligned audit plan

3 **Audit Plan Report Generator**
Leverages AI to dynamically generate an audit plan report for Audit Review Committee with ability to collaboratively

4 **RFI Intelligence Assistant**
Summarise audit RFIs and enables auditors to query evidence interactively to validate controls and uncover exceptions efficiently

5 **Audit Work Programs Assistant**
Recommends tailored audit work steps based on the process and control objectives, enabling efficient audit execution planning.

6 **Audit Finding Autofill Assistant**
Uses NLP to automatically populate audit finding records from control gap descriptions, improving speed, consistency, and completeness

7 **Reference Content Suggestions**
Recommends and tags relevant root causes and associated risks for audit findings, enabling consistent classification and improved audit insight quality.

8 **AI-Powered Executive Summary**
Generate concise and insightful executive summaries from audit reports, highlighting key findings, risk themes, for Audit Committees.

9 **AI-Powered Audit Report Generator**
Leverages AI to draft audit reports by consolidating findings and risk themes, enabling faster and more consistent report preparation.



10 **AI Findings Analysis**
AI reviews audit findings to confirm all 5 Cs Criteria, Condition, Cause, Consequence, and Corrective Actions are appropriately captured.

11 **Review Remediation Evidence**
Leverages AI to review supporting evidence for remediation plans, validating completeness, and relevance to reported finding.

12 **AI Insights Bot**
Leverages AI to provide on-demand insights from audit data, findings, and reports, enabling faster analysis of risks, trends, and control issues.

13 **AI Knowledge Base Bot**
Real-time chat-based assistant providing instant access to auditor's queries to support users in daily operations.

14 **AI-Assisted Content Review**
Leverages AI to perform quality assurance checks on audit data, ensuring accuracy, clarity, consistency, and completeness.

- Higher Audit Quality
- Consistent Assurance
- Stronger Insights & Value



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