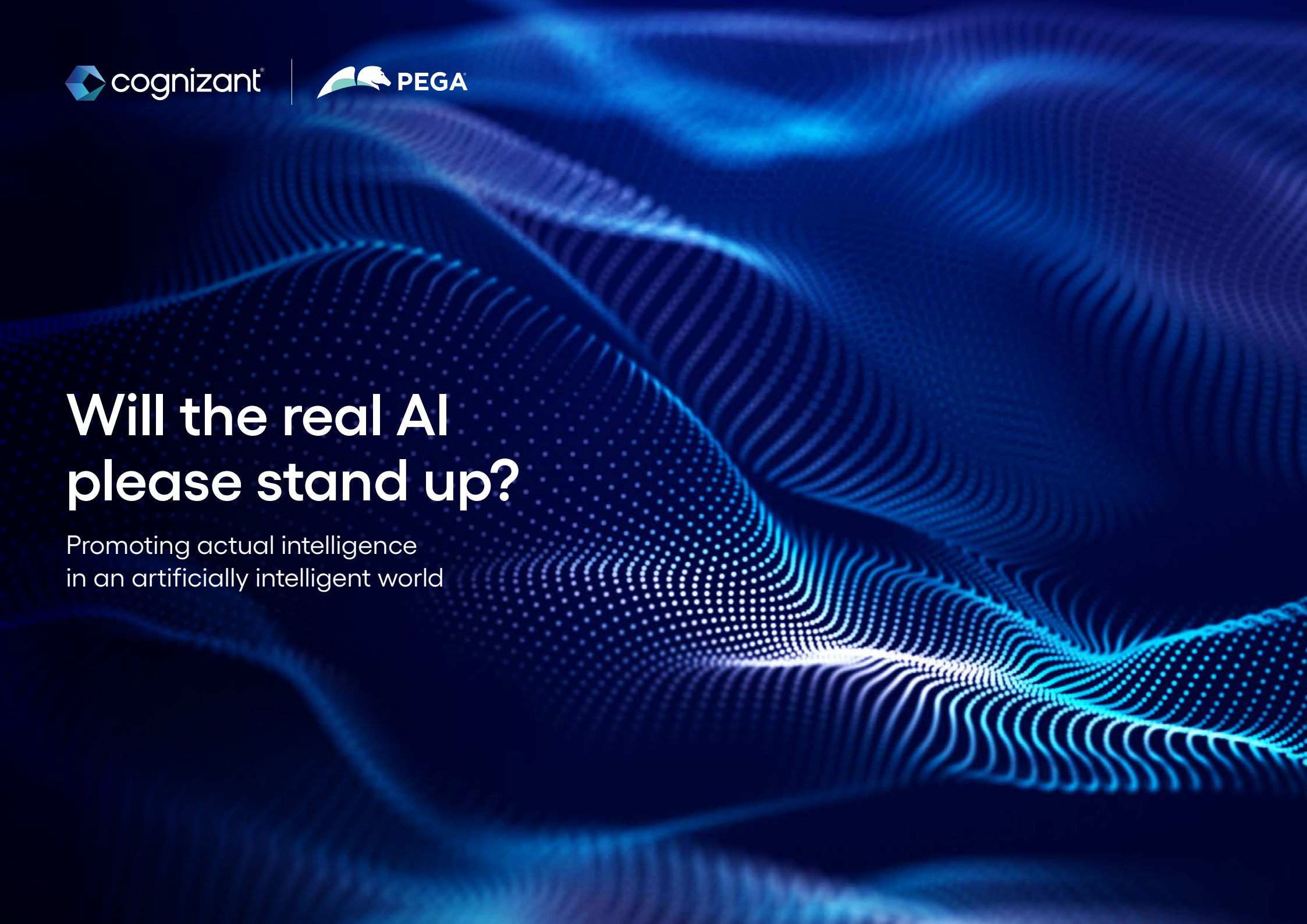

cognizant
PEGA
Will the real AI please stand up?
Promoting actual intelligence in an artificially intelligent world

Contents

Executive summary

The UK government stands at a moment of immense potential, with AI and automation offering transformative capabilities that must be balanced with appropriate safeguards.

This tension comes at a time when transformation has never been more urgent, with organisations held back by traditional operating models and budgets under scrutiny.

This white paper argues that human-centred AI and automation, when thoughtfully integrated, can amplify human potential, reduce costs, and improve citizen outcomes.

The consolidation of AI capabilities within the Department for Science, Innovation and Technology (DSIT) creates a timely opportunity to accelerate practical implementation with clear safeguards.

Through democratisation of technology, investment in skills, and cross-departmental data sharing, the government can release "actual intelligence" of organisations: the human creativity, empathy and judgement needed to deliver exceptional public services.

Cognizant and Pega, with over 25 years of strategic partnership and over 360 successful projects globally, offer proven approaches to help the UK turn AI vision into a practical delivery.

A vision of the future

Imagine a citizen, Sally, who has recently given birth and needs to interact with multiple government services. Rather than navigating fragmented websites, forms and phone calls—often repeating the same information—Sally accesses a digital concierge through a government portal.

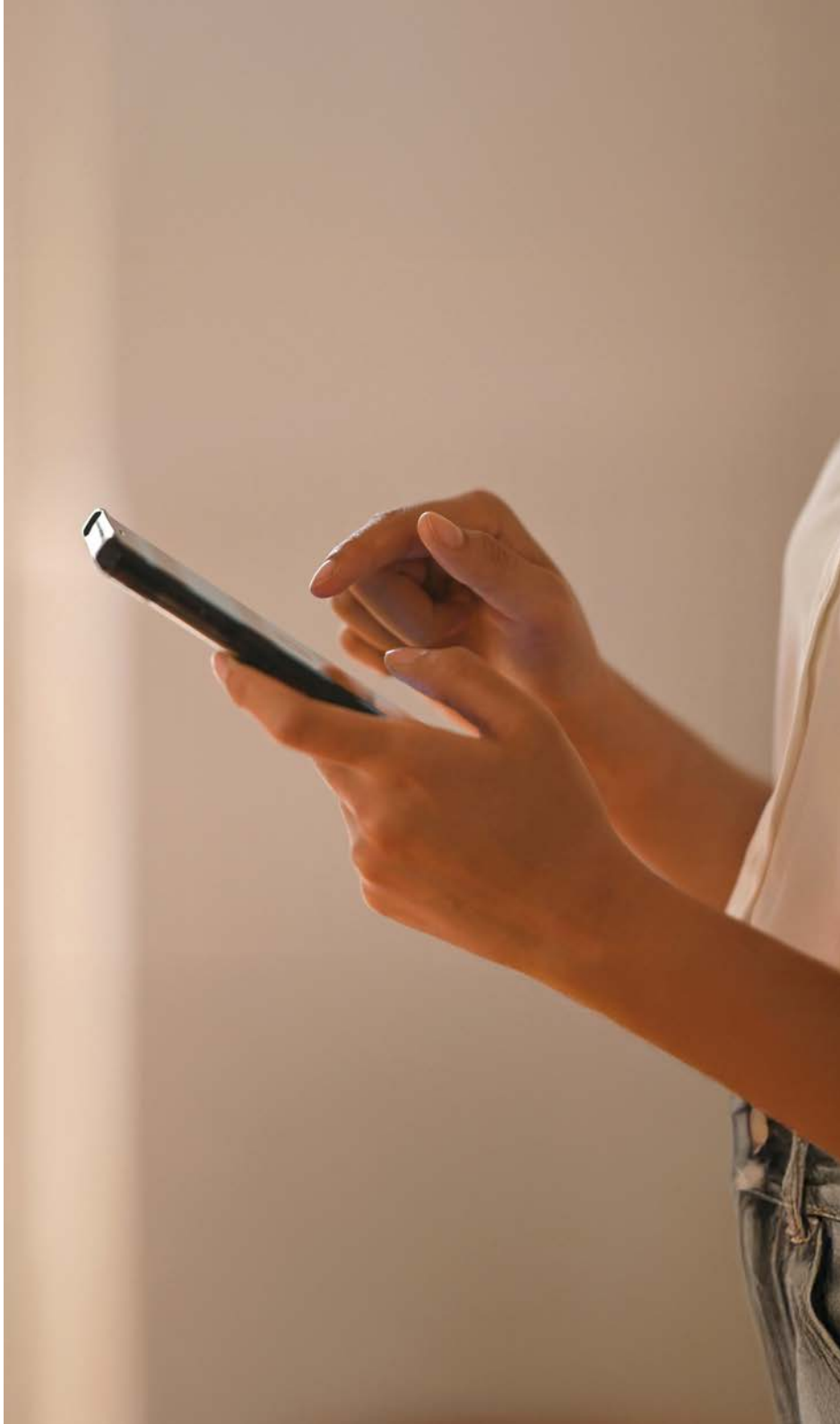
Sally converses with an AI-empowered voice system that asks relevant questions, identifies her needs, and orchestrates the necessary processes behind the scenes. The system recognises that Sally may qualify for child benefit without her explicitly mentioning it. “I’ve had a child, and I have an inkling that’s something to do with HMRC,” she says. The digital concierge responds: “While it doesn’t affect your tax, you might want to know about child benefit. Here’s some information, and I can help you apply for it now.”

For public servants, the near future looks equally transformative. Imagine a caseworker guided by AI through complex processes and freed from routine paperwork, able to focus on the human elements of their role, providing empathy, exercising judgement, and solving unique problems. The goal isn’t to eliminate administrative roles but to elevate the staff, allowing AI to handle repetitive tasks while people concentrate on meaningful work.

Early implementations across government are already demonstrating what’s possible, though the UK has opportunities to accelerate practical adoption.

This vision of augmented caseworkers and advisors preserves the irreplaceable human element of public service while eliminating the drudgery that leads to errors, delays, and frustration. It’s not about replacing people with technology, but about taking the robot out of the human, freeing public servants to apply their actual intelligence to the challenges that matter most.

This is not a distant dream. Early implementations across government are already demonstrating what’s possible, though the UK has opportunities to accelerate practical adoption.



Early successes pointing to the future

For all its challenges, the COVID-19 pandemic showcased the potential of human-centred automation in government.

The Furlough Scheme, delivered in just six weeks with high levels of automation, supported 11.7 million jobs and disbursed £70 billion in aid.[1] This achievement demonstrated how existing tools, aligned to clear objectives and genuine human needs, can deliver exceptional results at unprecedented speed and scale.

The EU Settlement Scheme provides another compelling example. Following Brexit, millions of EU citizens needed to confirm their status to remain in the UK. Using Pega technology, the Home Office digitised and automated the entire process, creating a verifiable audit trail and accelerating application processing. At its peak, up to 30,000 cases were processed daily.[2]

HMRC's transformation of the Child Benefit service through its Single Customer Account programme demonstrated similar success. Previously, inconsistent customer experiences resulted in high call volumes to HMRC, with many journeys requiring paper forms and response times of up to 30 days. The transformation, delivered through Cognizant and Pega's partnership, created a user research-based approach with an API-driven microservices architecture and an experience layer that follows GDS standards.

Average child benefit payment times improved from 30 days to just three days, and claims are now completed in around 10 minutes on the GOV.UK platform and customer satisfaction scores exceed 92%. The delivery model has since scaled to work across five workstreams, including elements of the Self-Assessment and Pay As You Earn services.

These successes point to a future where human-centred technology helps government do more with less, addressing the fundamental challenge of rising service demands in an era of fiscal constraint.

The results speak volumes about releasing actual intelligence

3 days

Average child benefit payment times improved from 30 days

10 mins

Time that claims can now be completed in

92 %

Customer satisfaction scores

Current landscape and opportunity

The UK public sector faces unprecedented pressures. The £131 billion budget deficit in fiscal year 2023-24 (4.8% of GDP) constrains resources precisely when citizen demands are increasing.[3]

NHS waiting lists exceed 7.3 million patients (January 2026), social-care demand is rising with an ageing population, and defence requirements have escalated amid global instability.[4]

Traditional responses such as increasing taxes, cutting services, or simply expecting more from an overextended workforce, have reached their practical and political limits. The most recently calculated tax gap (the difference between what HMRC expects to collect and what it actually collects) stood at £46.8 billion in the 2023-24 tax year.[5]

£46.8bn

The UK tax gap for the 2023-24 tax year

£131bn

budget deficit in fiscal year 2023-24 (4.8% of GDP)

Closing this gap solely through conventional staffing increases alone isn't feasible. The solution lies in intelligent automation that scales efficiency and effectiveness while preserving the human intelligence that makes public services work.

The building blocks of transformation

Transforming public services requires a cohesive suite of automation tools working in concert with service stakeholders and users. But more than that, it requires a balanced approach to human-AI collaboration.

Gartner's BOAT concept (Business Outcome-focused Automation Tools) platforms, such as Pega's, enable human-AI fusion: environments where technology amplifies rather than replaces human capability. The real opportunity isn't in replacing staff but in expanding what teams can achieve.

Generative AI tools, from GitHub Copilot to platform-specific capabilities such as Pega's Autopilot, can dramatically reduce the effort required to deliver new services. Rather than viewing this as cost-cutting, forward-thinking organisations are reprofiling delivery teams to deliver better outcomes for customers without increasing headcount. This represents the first dimension of agentic capabilities: using AI agents to accelerate solution design and build.

Tools like Pega's GenAI Blueprint™ support this by combining the expertise of Pega and Cognizant with widely adopted best practices and human knowledge. This expands delivery capability, allowing people with deep domain expertise to contribute without becoming pure developers.

1 Intelligent Case Management (ICM)

ICM manages complex workflows across departmental boundaries. Pega's ICM can reduce resolution times and streamline processes by automatically routing work, identifying missing information, and ensuring compliance, enabling caseworkers to handle complex cases more effectively, reducing delays and improving citizen services.

For example, ICM can automate eligibility checks in benefits processing while flagging unusual circumstances for human review. This ensures consistent policy application while preserving human judgment where it matters most.

Returning to Sally's journey, ICM helps ensure her child benefit application is processed efficiently, with the system identifying her eligibility and suggesting other relevant benefits she might qualify for, while freeing caseworkers to focus on providing personalised support.

2 Machine Learning (ML)

ML enables predictive insights and pattern recognition at scale. In tax administration, ML excels at fraud detection by analysing financial data patterns while minimising false positives that might inconvenience honest citizens.

A key application in government is improving the allocation of investigative resources. Rather than assigning cases sequentially, ML can identify cases with the highest potential for recovery or urgency.

3 Generative AI (GenAI)

GenAI accelerates process design and content creation. Pega GenAI Blueprint™ maps workflows in minutes, bringing together business, IT, and AI to design and implement new solutions rapidly.[6]

Beyond the design phase, GenAI creates enormous potential for citizen communication. Many citizens face significant barriers when seeking government support, from the complexity of forms to the emotional challenges of admitting difficulties. In sensitive areas such as debt advice, AI interfaces can offer a judgement-free zone where citizens can receive anonymous yet personalised guidance.

GenAI also enables what once were complex, specialist tasks to be performed by someone with little technical ability. For instance, allowing business analysts to use natural language processing to generate management information reports from data in enterprise systems in real-time.

For theoretical citizen Sally, GenAI could craft personalised communications about available parental support services, explaining complex eligibility criteria in accessible language tailored to her specific situation and potentially anticipating her needs as her child grows.

4 The emerging ecosystem

Gartner's BOAT concept, introduced in late 2024, integrates ICM, ML, GenAI, and low-code development, enabling rapid solutions even on legacy systems.[7]

When these technologies are deployed together to free human intelligence for high-value, empathetic decision-making, they deliver far greater impact than any single tool.

A digital concierge, for example, like the one Sally used, combines natural language processing to understand citizen inquiries, machine learning to identify needs and eligibility, and case management to orchestrate actions across services.

This orchestration of technologies within defined processes forms the second dimension of agentic capabilities: using agents to handle routine tasks such as case filing, payments and work routing within applications while preserving human oversight where judgement and empathy matter most.

5 Agentic orchestration: aligning agents to organisational goals

The emergence of agentic AI brings opportunities on two fronts: building technology faster and using applications more effectively.

Agentic capabilities in design and build

Tools like Pega's Autopilot and GenAI Blueprint™ use multiple agents to accelerate solution design and delivery. Rather than spending weeks in requirement workshops, teams can articulate problems in natural language and quickly build working prototypes.

This democratises access to the tools, allowing product teams to solve problems without reliance on scarce central technical resources.

Agentic tools can empower these teams to address specific pain points, such as a high-failure process step or routine quality check, within existing governance.

Agentic capabilities in application use

When applications run, agents can handle mundane activities that currently consume human time. AI never gets bored with repetitive tasks. However, AI can hallucinate, which means agentic capabilities in live operations require careful orchestration.

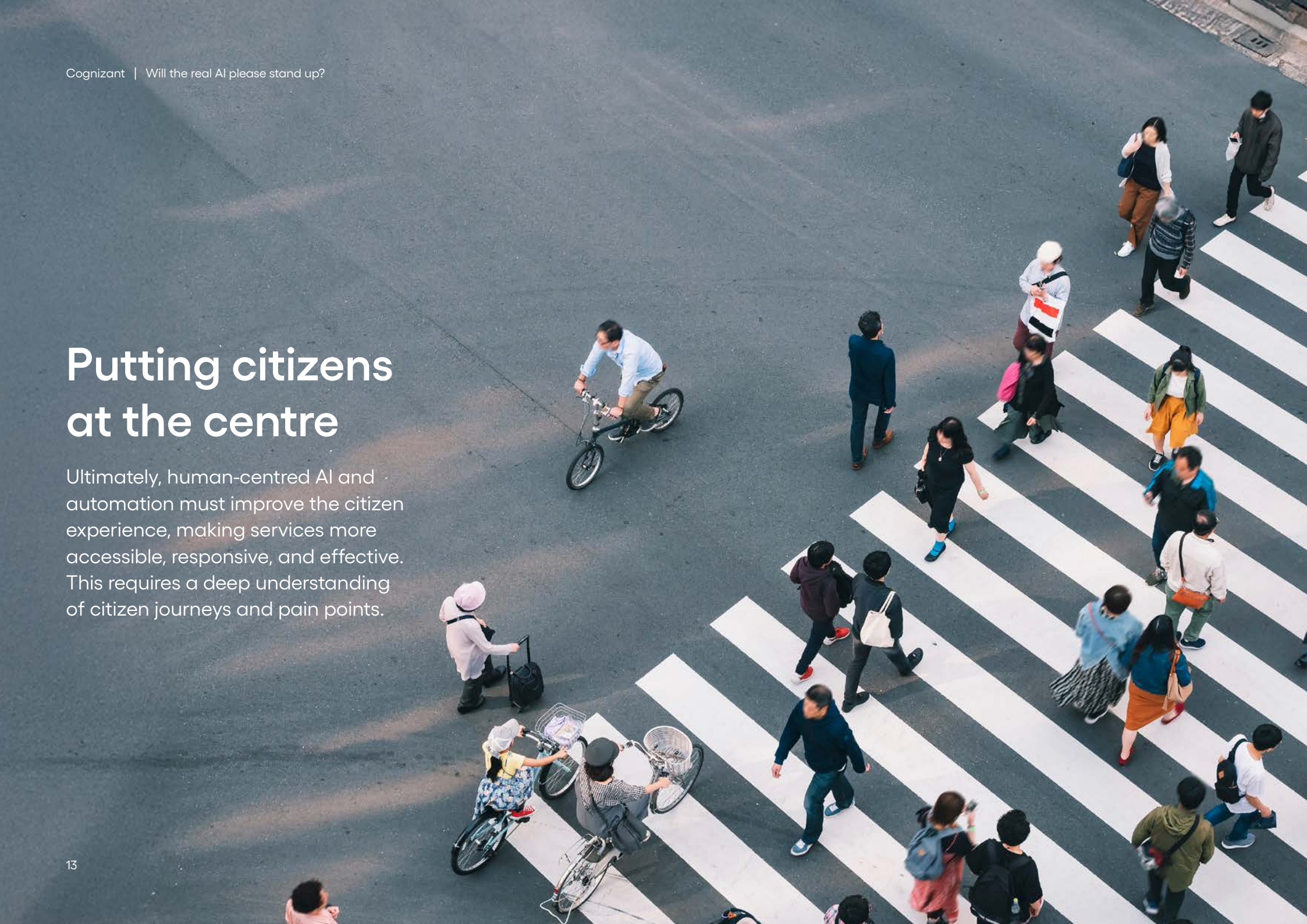
This is where alignment and control matter. Rather than a "wild west" of ad hoc agents for mission-critical decisions, organisations need orchestration layers that define where agents operate, within what boundaries, and with appropriate auditability and transparency.

Using the right AI for the right job is crucial. Generative AI excels at creating content and interpreting natural language but struggles with technical problem-solving where machine learning is more appropriate. In public-sector contexts where decisions must be explainable and auditable, agents must work within established business-process orchestration rather than replace it.

The result: technology handles routine processing, freeing humans to apply creativity, empathy, and judgment.

Putting citizens at the centre

Ultimately, human-centred AI and automation must improve the citizen experience, making services more accessible, responsive, and effective. This requires a deep understanding of citizen journeys and pain points.



In one large government department, telephony advisors were observed using their favourite wrap-up codes after calls because they were overwhelmed by the available options. This produced unreliable business intelligence, making it impossible to understand why people were actually calling. Semi-automating the wrap-up process, with call codes automated, solved this problem, improving data quality by capturing only essential information provided by the handler.

For benefit applicants, a single online portal powered by AI could guide them through a pre-filled, intuitive process with real-time updates and tailored support.

In healthcare, AI-assisted diagnosis has shown strong potential. A recent study found AI accuracy rate of 0.98 compared to 0.969 for trained pathologists in colon cancer diagnostics.[8] When doctors collaborated with AI tools, they achieved the best outcomes of all, highlighting the power of that human-AI fusion.

As services become increasingly digital, public-sector organisations must ensure they remain accessible to all citizens, regardless of technical ability, language, or disability status. Digital inclusion must remain paramount throughout this transformation. This could means designing services that work across multiple channels (digital, phone, and in person) and providing assisted digital support where needed.

Building trust through appropriate human oversight and transparent processes is also crucial. Citizens must understand how their data is used, what role automation plays in decisions affecting them, and how they can challenge automated decisions. Pega implemented a 'T Switch' that allows organisations to control the level of transparency applied to machine learning AI-driven decisions.

The HM Government AI Playbook (February 2025), provides valuable guidance on these ethical considerations, emphasising the importance of "meaningful human controls" that preserve accountability while leveraging technological benefits.[9]

“As services become increasingly digital, public-sector organisations must ensure they remain accessible to all citizens, regardless of technical ability, language, or disability status.”

Empowering the public sector workforce

The transformation of public services isn't just about citizen experiences; it's equally about empowering the public sector workforce. Far from replacing roles, human-centred AI and automation create opportunities for career growth, skill development, and more meaningful work. Here's how:

Democratising IT delivery

Low-code tools, such as Pega's Blueprint™, enable frontline staff, those who understand citizen needs best, to design solutions without extensive technical knowledge. According to Gartner research, this approach accelerates application development tenfold and cuts IT backlogs by 50%.[10]

One government organisation reported remarkable success in retraining call handlers as process designers, solution architects, and testers. This created career advancement paths while ensuring that those with deep operational understanding designed solutions.

Freeing staff for high-value work

By automating routine tasks, public servants can focus on the complex, empathetic aspects of their roles that provide the greatest value to citizens. For example, in customer service, GenAI can draft most routine letters, increasing productivity by freeing staff to focus on communications requiring nuance and judgment.

Similarly, a well-designed AI chatbot could handle 80% of routine enquiries, freeing advisors to focus on complex cases where their expertise make the greatest difference.

Evolution of roles

The future public sector workforce will evolve. New roles will emerge, such as AI ethics officers, citizen experience designers, and automation specialists, while existing roles will transform to leverage these new capabilities.

The future vision is one of "augmented caseworkers and advisors", where staff continue in vital administrative roles but focus on meaningful work while technology handles routine tasks.

Human-AI fusion in practice

The transformation we're describing combines human and AI capabilities in practical ways. Developers spend less time writing code and more time engaging with citizens' needs. Caseworkers handle complex, sensitive cases while AI processes straightforward applications. Analysts ask questions in plain English and receive immediate answers.

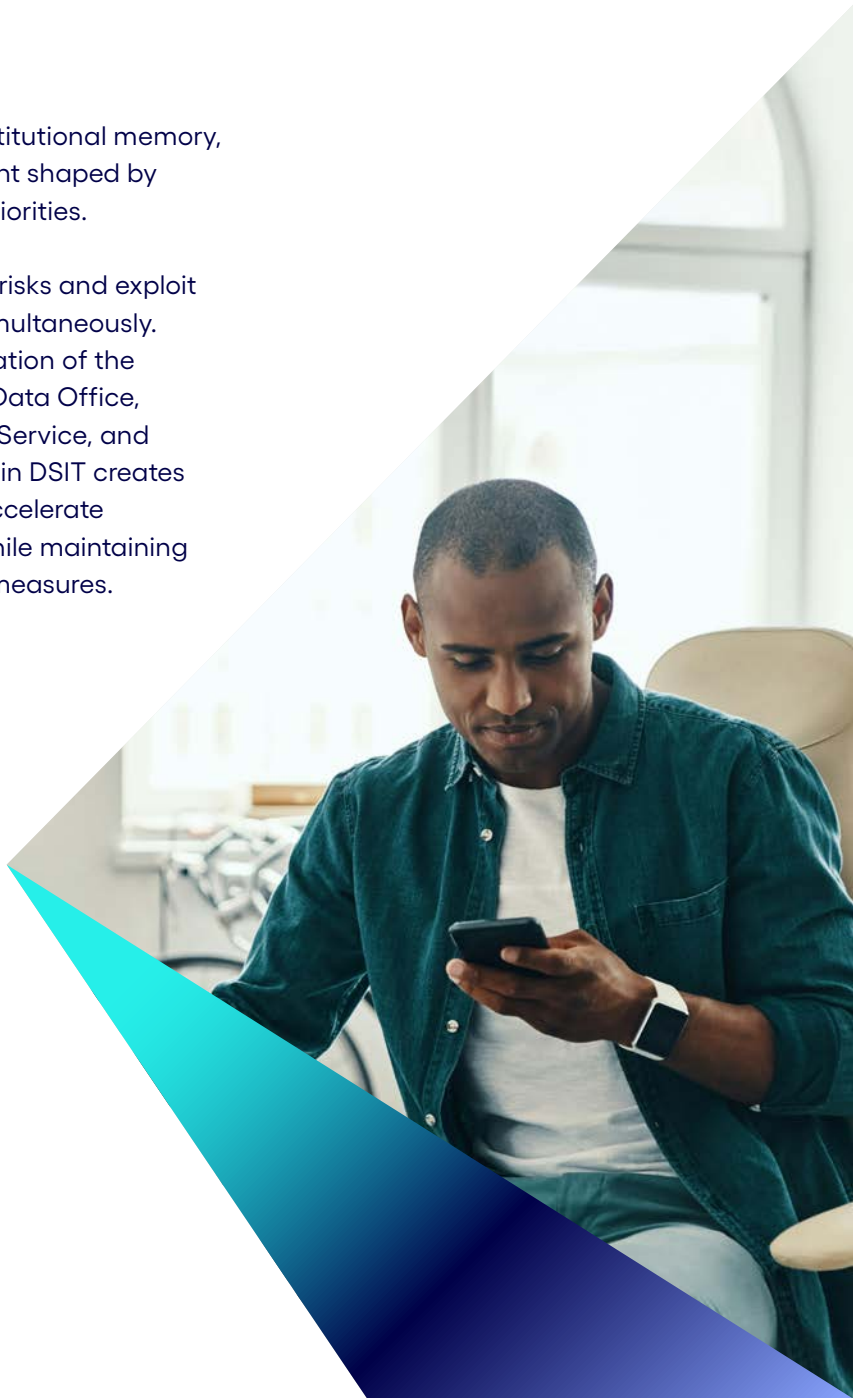
The pattern is consistent: free people from administrative drudgery so they can focus on the work that requires creativity, empathy, and judgment.

Balancing innovation with safety

The UK's approach to AI in government demonstrates a tension between ambition and caution. On one hand, there's immense ministerial interest and enthusiasm about AI's potential to transform government operations. On the other hand, there's a strong focus on AI safety, regulation, and risk management through initiatives like the AI Safety Summit at Bletchley Park and the AI Security Institute.

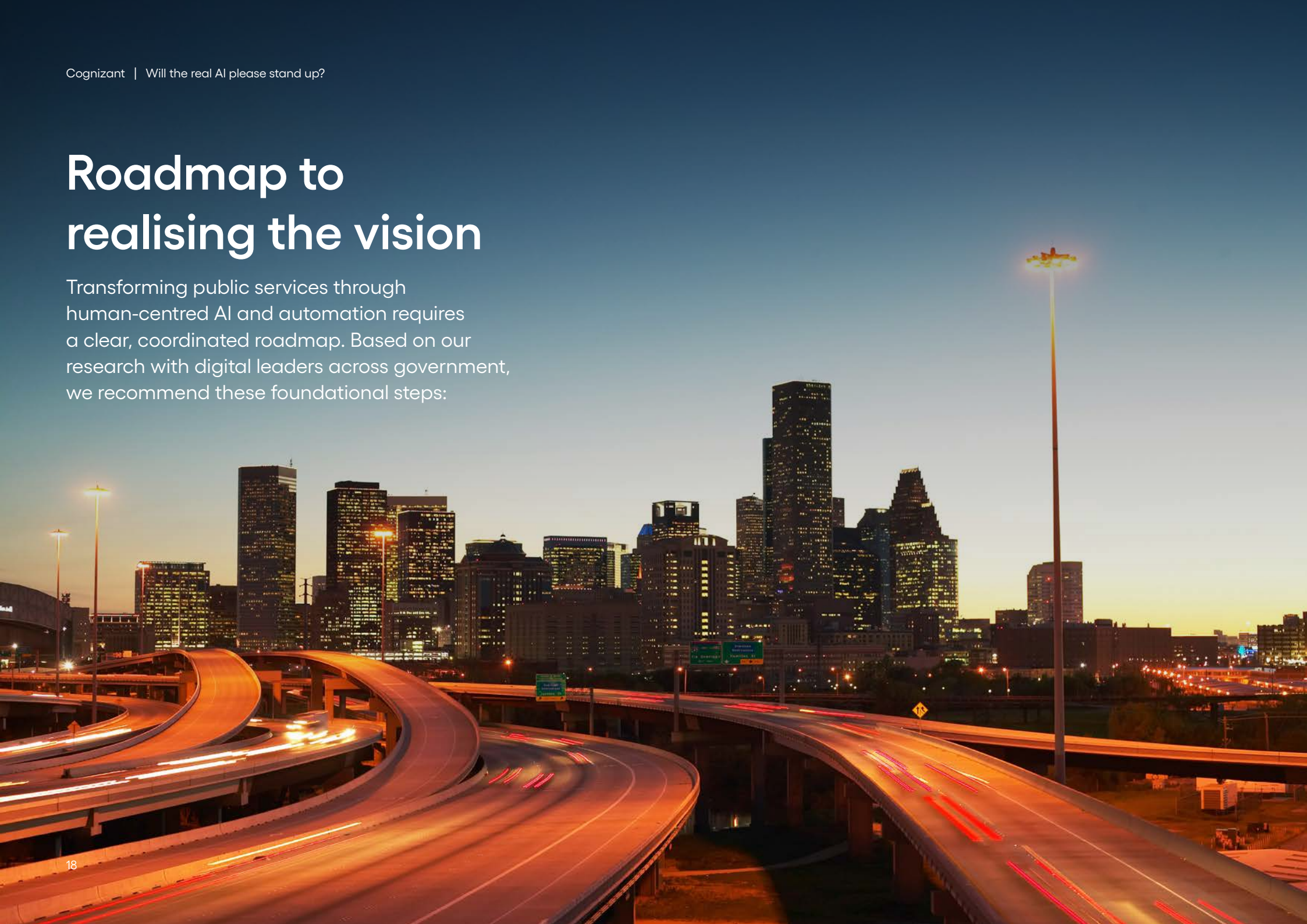
There's also a strategic dimension to consider. Government must retain their intellectual property and distinctive ways of working. Complete outsourcing of critical capabilities risks losing the very things that make public services effective: local knowledge, institutional memory, and human judgment shaped by British values and priorities.

We should manage risks and exploit AI's opportunities simultaneously. The recent consolidation of the Central Digital and Data Office, Government Digital Service, and Incubator for AI within DSIT creates an opportunity to accelerate practical delivery while maintaining appropriate safety measures.



Roadmap to realising the vision

Transforming public services through human-centred AI and automation requires a clear, coordinated roadmap. Based on our research with digital leaders across government, we recommend these foundational steps:



1 Set a clear AI vision and strategy

The newly consolidated AI hub within the Department for Science, Innovation and Technology and the AI Playbook for UK Government provide a wealth of useful content. Departments must translate this into a clear, actionable AI vision, aligned to their strategic priorities and citizen outcomes.

2 Enable secure data sharing and management

Develop cross-government data sharing standards that enable departments to exchange information securely and efficiently, crucial for effective AI applications. Rather than attempting to standardise all data management practices across diverse departments, focus on creating common protocols for data exchange, API standards, and interoperability.

The government's Digital Information and Smart Data Bill present an opportunity to advance this agenda, making it easier for AI systems to access the data they need while maintaining appropriate security and privacy controls.

3 Establish clear use case frameworks

For AI to be used effectively, clear use case frameworks to enable identification and scaling of promising departmental AI innovations are a must.

4 Invest in AI skills development

Launch comprehensive government-industry training programmes to enhance AI literacy among government employees. Build on the AI Skills Boost, a programme to improve UK workforce readiness by upskilling 10 million UK workers in AI skills by 2030, an ambitious initiative by DSIT that recognises the scale of capability building required for effective AI adoption across the UK.[11] Cognizant is one of the strategic partners in the AI Skills Boost initiative, reinforcing our commitment to skilling and building a resilient, future-ready UK workforce.

5 Develop department-specific AI adoption plans

Develop specific AI adoption plans for each department with clear metrics that outline expected outcomes, timelines, and benefits. Each department's Chief Digital Information Officer should ask their heads to gather opportunities for automation and AI.

6 Create safe spaces for innovation

Establish environments where teams can experiment and iterate without fear of failure, working with experts like Cognizant and Pega in innovation workshops.

7 Strengthen coordination and measurement

Use the single AI hub within DSIT to drive cross-government coordination and establish shared metrics for progress and impact of cross-government digital missions.

8 Deploy agentic capabilities within governance guardrails

Establish a centre of enablement that allows product teams to use agentic tools for automation and integration within defined governance boundaries. Product teams should have access to low-code tools and natural language interfaces that enable faster automation of high-frequency pain points without navigating long procurement and approval cycles.

Navigating implementation challenges

Implementing human-centred AI and automation inevitably brings challenges that require practical solutions.

Data quality and interoperability

Data quality and integration represent significant barriers to progress. Government departments must prioritise solving fundamental data and enabling interoperability, without this, the effectiveness of advanced AI applications will be severely limited.

Cultural barriers

Despite rising service demands, fears of job losses persist. Clear communication and visible success stories should be shared widely to demonstrate how AI augments rather than replaces human roles.

Technical hurdles

Legacy systems can hinder integration and progress. Modernisation tools such as that offered by Pega can bridge legacy infrastructure and new capabilities without the need for wholesale replacement.

The concept of a “Virtual Customer Record” (VCR) proves particularly valuable in this context. Rather than waiting for perfect data integration across systems, departments can create virtual views that bring together information from disparate sources to support automation and decision-making.

Ethical considerations

AI bias and opacity threaten public trust in government services. Rigorous ethical practices, including regular auditing, transparent decision-making, and appropriate human oversight are essential to maintaining citizen confidence and ensuring fair outcomes.

Cognizant and Pega: partners in transformation

Transforming public services requires proven expertise, delivery capability and trusted technology partnerships.

Cognizant and Pega bring more than 25 years of strategic collaboration, combining Pega's industry-leading low-code platform with Cognizant's deep experience in the public sector.

Together, the partnership has achieved success in over 360 projects across 80 organisations globally, with particular strength in customer service and engagement solutions.

Cognizant is a Global Elite Partner in the Pega ecosystem. Cognizant's Pega practice, housed within the Cognizant Enterprise Platform Group, holds one of the largest pools of Pega talent globally and has established itself as a leader in developing and selling Pega-based solutions in our long partnership.

This capability has been recognised through industry awards, including Pega Partner of the Year 2025 at PegaWorld and EMEA Blueprint Pioneer of the Year 2025 (January 2026) reflecting our outstanding contributions to enterprise transformation through exceptional delivery, innovation, and client success.[12]

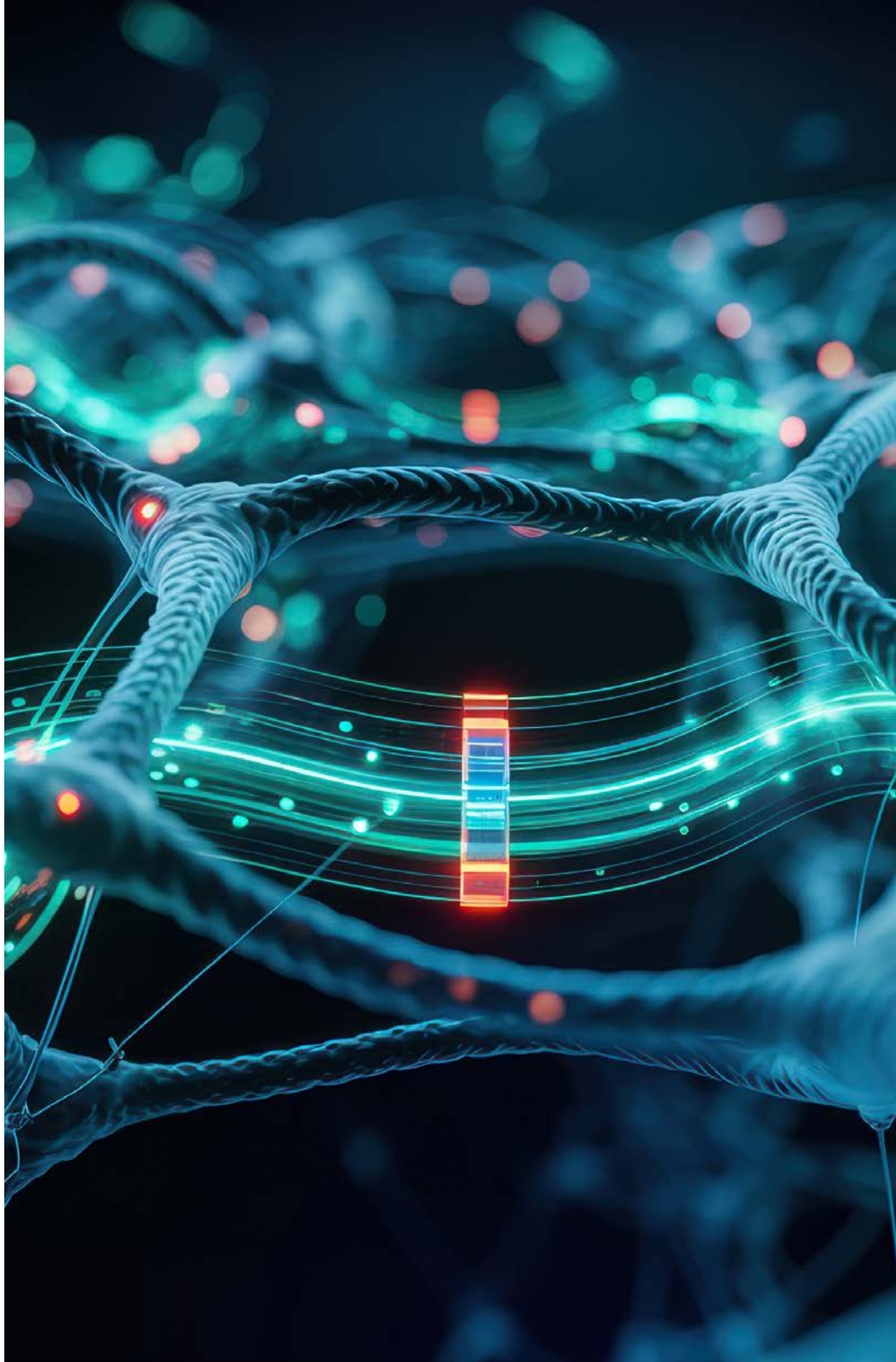
A structurally different approach to agentic AI

What distinguishes the Cognizant-Pega partnership is our shared philosophy on the deployment of agentic AI. In conversation with Cognizant's CEO, Ravi Kumar S, Pega CEO Alan Trefler explains: "Use your reasoning at design time. Don't do the reasoning at runtime."[13] This represents a fundamental and structural difference from competitors who use AI reasoning during live operations—making decisions at runtime about mortgages, insurance policies, or interest rates based on data that may not be clean or outcomes that haven't been predetermined.

"At runtime, that should have already been figured out in advance." Trefler notes. This two-stage approach—using AI agents to accelerate design and build, then deploying proven workflows with appropriate guardrails—creates predictability and accountability that public sector organisations demand. As Trefler emphasises, "We're not 20% ahead. We're structurally different."

This structural difference matters for public sector deployments where decisions must be explainable, auditable, and aligned to established policy. Rather than hoping AI will "figure it all out" in real time, the Cognizant-Pega approach ensures human intelligence defines the rules, processes, and boundaries during design, while AI accelerates the creation and execution of those workflows.

From rapid development using pre-configured components to seamless integration with existing systems, our partnership is designed to accelerate your transformation journey while minimising risk. Cognizant's extensive experience in public sector change management complements Pega's technical capabilities, ensuring that transformation initiatives succeed technically and organisationally.



Releasing actual intelligence

The vision outlined in this white paper is ambitious but achievable.

Human-centred AI and automation can transform UK public services: not by replacing human intelligence, but by releasing human intelligence from mundane constraints to focus on what matters most.

The government's consolidation of AI capabilities within DSIT creates a unique opportunity to accelerate practical delivery while maintaining appropriate safety measures. With challenging fiscal pressures and service demands rising, the time for cost-effective innovation through AI is now.

The transformation begins with understanding what's possible. Cognizant and Pega offer practical ways to explore these technologies with minimal upfront investment and risk.

Contact us to discover how human-centred AI and automation can address your specific challenges and help you deliver better outcomes for both, citizens and staff.

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James Twigg
Associate Director,
Solution Architecture

James.Twigg@cognizant.com

James is an Associate Director of Solution Architecture at Cognizant with three decades of IT delivery experience. His career encompasses early data warehouse development at Britannia Airways and technical coding and delivery roles at organisations including Oracle and Actuate. His more recent focus has been in working with government clients to help them adopt emerging technologies such as GenAI and de-risking legacy systems modernisation.

Chris Medley
Associate Director, Enterprise Integration & Digital Process Automation (UK)

Chris.Medley@cognizant.com

Chris is an Associate Director at Cognizant, working extensively within the Public Sector. He has over 10 years of commercial leadership experience within Integration and Automation and is currently working with HMRC on strategic initiatives to accelerate automation projects. Before working with System Integrators, Chris worked for IBM in the Integration and Process space and has experience in large-scale transformation projects.

Simon Haydn-Lee
Managing Director – Government

Simon.Haydn-Lee@pega.com

Simon is Managing Director of EMEA North – Government for Pegasystems. He is passionate about driving positive change in frontline public services and supporting departments to transform. Having previously held leadership positions at global integrators he understands the power of successful partnerships in government.

Alex Case
Senior Director,
Government Industry Principal

alex.case@pega.com

Alex is Senior Director and Government Industry Principal for the UK, EMEA and Canada at Pegasystems. He is an internationally experienced public sector transformation and government delivery specialist with extensive experience as a technology leader, a senior civil servant and a management consultant. He has held a number of senior positions at the heart of government including in 10 Downing Street, the Cabinet Office and HM Treasury.

Pega provides the leading AI-powered platform for enterprise transformation. The world's most influential organizations trust our technology to reimagine how work gets done by automating workflows, personalizing customer experiences, and modernizing legacy systems.

Since 1983, our scalable, flexible architecture has fueled continuous innovation, helping clients accelerate their path to the autonomous enterprise.

Cognizant (Nasdaq-100: CTSH) engineers modern businesses. We help our clients modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at **www.cognizant.com or** @cognizant

World Headquarters
300 Frank W. Burr Blvd.
Suite 36, 6th Floor
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277

European Headquarters
280 Bishopsgate,
London,
EC2M 4RB
Phone: +44 (0) 207 297 7600

India Operations Headquarters
5/535, Okkiam
Thoraipakkam, Old
Mahabalipuram Road,
Chennai, 600 096
Phone: 1-800-208-6999
Fax: +91 (0) 44 4209 6060

APAC Headquarters
1 Fusionopolis Link, Level 5,
NEXUS@One-North, North
Tower, Singapore, 138542
Phone: +65 6812 4000