AiCore

Business Value of Generative AI in the UK Accounting Sector

Table of contents

AiCore

Executive Summary

The UK accounting sector faces mounting pressures: increasing regulatory complexity, talent shortages, and cost constraints. Generative AI (GenAI) offers a transformative response by automating routine tasks, enhancing analysis, and unlocking efficiencies across key accounting functions.

Early adopters report significant productivity gains; for example, AI-driven tools have reduced certain audit processes by up to 90% [2] and have saved finance teams dozens of hours annually [4]. GenAI is being applied in audit and assurance (for example, analysing entire ledgers for anomalies), tax and advisory services (for example, rapid research on new regulations), and internal operations (for example, AI assistants handling client queries).

These applications not only reduce manual workload and minimise errors, but also free professionals to focus on higher-value strategic work. Firms that embrace GenAI across their workforce are experiencing faster decision-making, optimised processes, and enhanced service innovation.

In summary, widespread GenAI adoption in UK accounting can drive measurable efficiency improvements, elevate service quality, and boost firm competitiveness; it could potentially contribute an estimated £2 billion to the UK GDP if scaled industry-wide [9].

This report details the top GenAI use cases by function, highlights organisational enablers such as data literacy, presents a case study of PwC UK's AI-powered transformation, and summarises productivity benefits in a structured table.

AiCore

Top Three GenAI Use Cases by Function

1. Audit & Assurance

AI-Augmented Risk Assessment

Traditional audit sampling risks missing anomalies or fraud indicators. GenAI, through machine learning-based anomaly detection, allows auditors to examine complete datasets and quickly pinpoint unusual patterns. This capability not only enhances audit quality, but also saves considerable time. AI-driven audit platforms can review 100% of journal entries and flag risks within seconds [13]. A KPMG survey reported that 39% of finance leaders expect AI to reduce audit team size via efficiency gains [3].

Automated Documentation and Review

Auditors often spend extensive time reviewing contracts, invoices, and board minutes. GenAI language models excel in summarising lengthy documents. For example, an audit team can use an AI assistant to generate an executive summary of a complex contract or court judgement within minutes, a task that would otherwise take hours [11]. In addition, internal chatbots such as Deloitte's "DARTbot" are being deployed to answer auditors' technical questions in real time, further streamlining documentation review processes [16]. Collectively, these tools can reduce first-pass document review time by 20–40%.

Continuous Audit and Monitoring Automation

The traditional year-end audit provides a retrospective view of financial health. By contrast, GenAI systems can continuously monitor financial data and controls, alerting auditors to exceptions in near real time. Although still in the pilot phase, automated monitoring has shown promise in enhancing the timeliness of assurance work; for example, AI-driven expense auditing solutions have reduced audit review times by up to 90% in areas such as travel and expense report checks [2].

AiCore

Top Three GenAI Use Cases by Function

2. Finance & Strategy

Financial Close Automation

Lengthy period-end closes and reconciliations can tie up significant resources. GenAI automates reconciliation, posting, and variance analysis during the close process. One multi-entity business reduced its quarterly close time by 75% (from 20 to 5 days) while achieving 40% higher auto-reconciliation accuracy [4][15]. Overall, top-performing finance functions are now automating up to 90% of close tasks, thereby enabling quicker strategic adjustments.

AI-Driven Financial Planning and Analysis (FP&A)

The manual consolidation of data for strategic planning and budgeting is time-consuming. GenAI tools can automatically generate budget drafts, perform real-time reforecasting, and run scenario analyses. A UK survey found that 66% of finance professionals expect AI to save 50–200 hours per year in FP&A tasks, while 67% report improved trust in the resulting analysis [4]. These efficiencies allow teams to redirect their focus to forward-looking strategic initiatives.

Strategic Advisory Insights

Accounting firms are increasingly required to offer high-level advisory services. GenAI can rapidly analyse financial and external market data to generate strategic recommendations or risk assessments. For example, an AI tool may compare a client's financial ratios with industry averages and draft a report that highlights areas for improvement. This capability can reduce research time by as much as 85–90%, enabling advisors to respond to client needs more quickly and serve a larger client base without increasing headcount [11].

AiCore

Top Three GenAI Use Cases by Function

3. Operations and Client Support

Client Inquiry Chatbots

Accounting practices often receive repetitive client queries (for example, filing statuses, basic tax questions, document requests). GenAI-powered chatbots can manage many of these routine inquiries through natural language conversations. Integrated into firm websites or client portals, these chatbots provide instant, 24/7 responses, thereby improving service experience and reducing staff workload [17]. In one case, an AI assistant deflected approximately 17% of support calls, enabling staff to focus on more complex issues.

No-Touch Document Processing (Tax and Administration)

Internal operations such as client onboarding, expense processing, and tax preparation involve substantial document handling. GenAI, in conjunction with optical character recognition, can extract and process information from forms, receipts, and statements automatically. An emerging no-touch tax return model, for instance, automatically matches client data to tax return fields. PwC is developing custom GPT models to assist with tax return reviews, ensuring faster compliance checks [10]. This automation can lead to a 50% reduction in processing time and fewer manual corrections.

Internal Knowledge Management and Support

Large accounting firms must quickly disseminate internal policies, methodologies, and past work to employees. GenAI can serve as an internal support assistant, retrieving information or drafting standard documents on demand. For example, EY and others have deployed AI-powered knowledge query platforms that allow staff to ask technical questions and receive summarised answers [20]. Deloitte's internal GenAI chatbot for audit has been rolled out to approximately 18,000 professionals, reducing research time by 20–25% and ensuring consistent, up-to-date information [20].

Top Three GenAI Use Cases by Function

4. Legal & Compliance

Regulatory Research and Compliance Monitoring

Accounting firms must continuously track changing regulations such as tax laws, accounting standards, GDPR, and AML rules. GenAI can rapidly sift through legal texts and regulatory bulletins to extract key changes, summarising complex regulations in plain language. This capability reduces research time by up to 90%, enabling firms to update compliance protocols more quickly and accurately [11][6].

Contract Analysis and Drafting

Legal teams often review client contracts, engagement letters, and NDAs. GenAI can systematically identify key terms, risks, or inconsistencies and even propose draft clauses. This automation can speed up contract review by 20–30% while reducing the risk of human error. Major firms are already using GenAI to generate initial drafts of tax advice memos and audit reports [19].

Internal Compliance and Risk Analysis

Maintaining internal compliance, such as adherence to data protection and independence rules, is critical. GenAI can analyse internal communications and procedures to flag potential breaches and ensure that processes align with legal requirements. Acting as a constant second pair of eyes, AI can expedite due diligence and risk management tasks, thereby helping to prevent costly compliance incidents [7].

AiCore

Top Three GenAI Use Cases by Function

5. Data & Analytics

Automated Data Processing and Anomaly Detection

Accounting teams must clean large datasets and identify outliers. GenAI solutions automate data entry, reconciliations, and anomaly detection. For example, AI algorithms can continuously scan transaction data to flag irregularities that human reviewers might miss [13]. This approach offers full data coverage (as opposed to manual sampling) and saves significant analyst time. Furthermore, AI-assisted financial analysis enables routine reporting to be completed in a fraction of the time, freeing up between 50 and 200 hours per analyst annually [14].

Predictive Modelling and Forecasting

Producing accurate forecasts under uncertainty is a perennial challenge. GenAI models can rapidly analyse historical data and generate multiple forecast scenarios. By recognising complex patterns, these models enhance forecast precision and enable what-if analyses on demand. In practice, AI-enhanced forecasting has led to more accurate predictions and reduced forecasting cycle times; for example, one case saw the monthly reconciliation and close process accelerated by 75%, while accuracy improved by 40% [4][15].

Natural Language Insights and Reporting

Non-technical decision-makers often find raw financial data difficult to interpret. GenAI-powered tools, such as large language models trained on financial data, enable users to ask questions and receive narrative summaries. For instance, a CFO may query an AI assistant for an explanation of a variance or a summary of quarterly trends. This democratises data analysis by reducing the need for specialist support and transforms analyses that once took days into clear, actionable summaries within minutes [14].

AiCore

Top Three GenAI Use Cases by Function

6. Human Resources & Talent

Recruitment Screening and Onboarding

HR departments in accounting firms process large volumes of applications. GenAI can automate resume screening and even conduct AI-driven video interview analysis. Studies have shown that AI-powered screening can cut resume review time by up to 75% and that AI scheduling can reduce interview coordination time by 36% [12]. Such efficiencies translate into lower cost-per-hire and faster identification of top talent.

Training and Knowledge Transfer

Keeping staff up to date on accounting standards, firm methodologies, and software is an ongoing challenge. GenAI can generate personalised learning content, quizzes, and even serve as a conversational tutor for new hires. By reducing the need for senior staff to repeatedly answer routine questions, AI-driven training can free up significant managerial time and enhance overall productivity.

Employee Engagement and Retention Analysis

GenAI can analyse employee feedback, from surveys to online reviews, to identify factors affecting retention and morale. By rapidly processing qualitative data, AI tools can flag emerging issues so that HR can intervene proactively. Early evidence suggests that organisations employing AI-driven people analytics experience lower turnover rates and higher overall productivity [7].

AiCore

Organisation-wide Data Literacy

Maximising the value of GenAI requires more than just technology: it demands a data-literate workforce and a supportive culture. Data literacy is the ability of employees to understand, interpret, and work with data (and AI outputs) effectively. In an accounting firm, this means that staff at all levels can confidently use AI tools, critically assess AI-generated insights, and integrate these findings into decision-making.

Process Optimisation:
Data-literate employees are better able to identify which tasks can be automated and how to optimise processes accordingly; their understanding of both the domain and AI-derived data enables them to refine AI criteria iteratively, ensuring sustained improvements in efficiency.

Trust and Ethical Use:
Data literacy also encompasses recognising AI's limitations, such as biases and data privacy issues. Educated employees are better equipped to use GenAI responsibly, thereby maintaining client and regulator trust in the firm's outputs.

Table of Productivity Improvements

Function	Use Case	Claimed Improvement	Reference
Data & Analytics	AI-assisted financial analysis and forecasting	Approximately 50–200 hours saved per analyst annually	[4] [14]
Audit & Assurance	Expense audit automation with AI	Up to 90% reduction in audit processing time for expense reports	[2]
Operations & Client Support	AI chatbot for client queries	Approximately 17% of support calls deflected, reducing staff workload	[17]
Finance & Strategy	Automated financial close process	75% faster close cycle with 40% higher auto-reconciliation accuracy	[4] [15]
Advisory & Consulting	Rapid research and document summarisation	85–90% reduction in research time for lengthy documents	[11]
Human Resources (HR)	AI-driven resume screening	Up to 75% reduction in time spent reviewing CVs	[12] [18]
Legal & Compliance	GenAI summarisation of regulations	Regulatory review completed in minutes (up to 90% time savings)	[11] [6]

AiCore

GenAI Case Study: PwC UK's AI-Powered Transformation

Organisation Overview:

PwC UK is one of Britain's largest accounting and professional services firms, offering audit, tax, consulting, and deals advisory services. In a highly competitive market, PwC UK faces significant pressure to deliver quality and value efficiently. The firm's business model emphasises a blend of human expertise and technology, encapsulated in its "human-led, tech-powered" approach. In recent years, PwC globally has identified AI as a strategic priority for improving service delivery and internal operations; notably, in 2023, PwC's US branch announced a US$1billion investment in AI over three years, with the UK arm actively participating in this wave [6] [9].

GenAI Implementation

In mid-2024, PwC UK became the first major reseller and enterprise client of OpenAI's ChatGPT Enterprise, deploying enterprise-grade data privacy measures that enable safe, day-to-day AI use [10]. PwC also developed custom GPT assistants for specific tasks: for example, a GPT model to review tax returns and highlight issues, another to assist with proposal writing, and additional tools that act as copilot systems for internal IT teams. These solutions are integrated into PwC's internal systems, such as dashboard and report generators and lifecycle assistants for project management. Importantly, all AI tools are governed by PwC's Responsible AI framework, which includes professional reviews and stringent data security checks.

Business Impacts

PwC's GenAI initiative has delivered tangible efficiency gains. For instance, in software development for internal tools, GenAI-assisted code completion and documentation have yielded productivity improvements of 20–50% [8]. On the client-facing side, an AI proposal assistant has dramatically reduced the time required to produce initial drafts, while auditors now utilise ChatGPT to summarise technical accounting literature and review client documents more rapidly. In tax services, a custom GPT tool for tax return reviews is estimated to save preparers numerous hours during peak filing season. Collectively, these efficiency improvements have resulted in nearly 5× higher labour productivity in AI-exposed sectors compared to those with low AI adoption [10]. While exact ROI figures remain confidential, PwC UK's experience demonstrates that GenAI can simultaneously enhance productivity, improve service quality, and bolster competitive advantage.

AiCore

References

[1] BDO, "BDO Survey Finds AI is Expected to Unlock More Efficient Audits, but Can't Replace Human Element," Press Release, Oct. 2023. [Online]. Available: [Link].

[2] P. Seidner, "How to Improve Expense Report Audits with AI and Automation," SAP Concur Blog, July 2024. [Online]. Available: [Link].

[3] Propylon, "The Role of Artificial Intelligence in Audit and Tax," Propylon Blog, May 2024. [Online]. Available: [Link].

[4] M. Bodger, "200 hours. That's how long AI COULD save you in FP&A," The CFO, Nov. 2024. [Online]. Available: [Link].

[5] DataSnipper, "The AI Revolution in Audit and Finance: 3 Major Ways AI is Changing Audit," Oct. 2024. [Online]. Available: [Link].

[6] ICAEW, "ICAEW guide: generative AI's role in accounting," Sep. 2023. [Online]. Available: [Link].

[7] Wolters Kluwer, "The power of AI: What accounting and tax professionals need to know," Jul. 2024. [Online]. Available: [Link].

[8] Thomson Reuters Institute, "How do different accounting firms use AI?" Tax & Accounting Blog, Jun. 2024. [Online]. Available: [Link].

[9] Sage & Demos, "Going for Growth: AI adoption in accounting could add £2bn to UK economy," Sage Press Release, Jul. 2024. [Online]. Available: [Link].

[10] PwC, "PwC is accelerating adoption of AI with ChatGPT Enterprise in US and UK," Press Release, 29 May 2024. [Online]. Available: [Link].

[11] B. Oliver, "ChatGPT for accountants: 3 ways to boost your firm's productivity," Firm of the Future Blog, Jan. 2024. [Online]. Available: [Link].

[12] HiringBranch, "6 Quick-Read Stats About AI and Talent Acquisition," Blog, Mar. 2024. [Online]. Available: [Link].

[13] MindBridge, "4 ways anomaly detection can supercharge your audits," MindBridge Blog, 2024. [Online]. Available: [Link].

[14] Corporate Finance Institute, "Leveraging Generative AI for Financial Analysis," Corporate Finance Institute, 2024. [Online]. Available: [Link].

[15] "How AI Is Transforming Financial Close Processes?" [Online]. Available: [Link], 2024.

[16] Deloitte, "Deloitte Launches Innovative 'DARTbot' Internal Chatbot," Press Release, 2024. [Online]. Available: [Link].

[17] ServisBOT AI, "Case Study: AI Chatbot Provides Digital Self-Service Boosting Productivity and Reducing Pressure on the Contact Center," ServisBOT AI, 2024. [Online]. Available: [Link].

[18] Dice, "AI Resume Screening for Efficiency, Fairness and Accuracy," Dice Blog, 2024. [Online]. Available: [Link].

[19] "Businesses Aim to Harness Generative AI to Shake Up Accounting ...," [Online]. Available: [Link], 2024.

[20] "Generative AI in accounting: Opportunities and risks to assess today," [Online]. Available: [Link], 2024.

AiCore™

AiCore

Specialist AI, Data and Cloud Capability Partner

Transform your team and business through government-funded training in generative AI

Haron Shams
Managing Director
haron@theaicore.com

Christian Kerr
Managing Director
christian@theaicore.com

Tim Howe
AI Consultant
tim@theaicore.com

AiCore