Capgemini

Data Science (DS) and Artificial Intelligence (AI):

Transactional Government Department Fraud Analytics

G-Cloud 15

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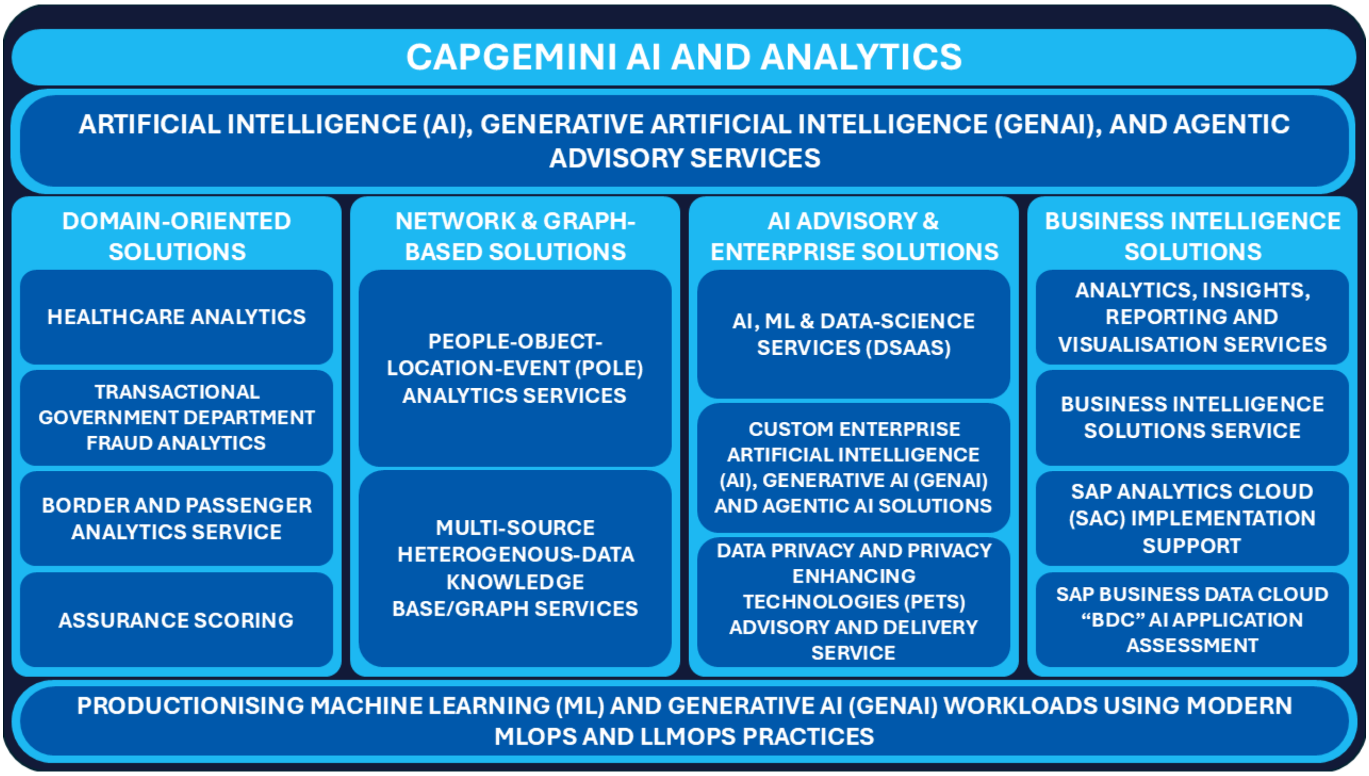
1 Service Overview

Capgemini is one of the leaders in the provision of big data exploitation and analytics and has a number of service offerings available on G-Cloud as illustrated below.

This document defines the Capgemini offer for Data Science (DS) and Artificial Intelligence (AI) in fraud analytics for transactional government departments, which can be commissioned in their own right or as an enabling capability.



This diagram is for illustration only and does not represent any obligation or responsibility of Capgemini.

Each year government departments lose money through fraudulent or incorrect applications in grants, loans, bursaries and benefits allowance. There are opportunities for government departments to work with Capgemini to shape, design and deliver new capabilities to identify, predict and establish propensities for fraud and error against applications to reduce the amount of funding that is lost.

Capgemini can deliver the following, through a range of cloud enable services:

- A **comprehensive review** of the fraud and error process to identify opportunities to improve efficiency and yield;
- **Insights** into the factors driving financial loss through fraud and error;
- Design, build, test and implementation of **advanced analytical techniques, Data Science and AI solutions** to identify fraud and error;
- Implementation of **personalised interventions** to stop / avoid fraud and error.

Six key solutions are available in this service:

- **Value Discovery** - Assess current capabilities and set out the vision, roadmap and potential value to be delivered by the programme through improved fraud analytics;
- **Risk modelling** – segmentation & risk profiles of citizens, develop a risk model and a risk scoring approach;
- **Peer grouping** – breaking down population in strata (by geography, income, profession, business) to identify statistically significant anomalies (fraudulent entities) and link analyse their effects;

- **Target Operating model** – Define the processes, technical & data architecture and organisation required to deliver reduced non-compliance;
- **Fraud and Error Solution Implementation** – Detailed design enabling the implementation of the capabilities and solutions required for the client to deliver benefits from each release;
- **Assurance** – Analysis of the business & IT architecture to assess and give assurance on whether it is robust, future proof and will deliver government objectives.

Capgemini's approach helps organisations build analytical strategies to fight Fraud and Error by providing business analysis, design / consultation and service management in support of the design and deployment of Cloud based Data Science and AI services.

2 Business Need

Capgemini brings proven expertise and can help shift the focus toward proactive fraud prevention and early error detection. Typical issues Capgemini resolve:

- Reduction in time spent on fraud investigation and punishment and more spent on prevention and early detection;
- Understanding the mechanisms of fraud and how to spot patterns and predict future trends;
- Establish principles of trend and propensity analytics against application history, to build early intervention strategies;
- Keeping up with increasing industrialisation of fraud and technological developments through faster turnaround from detection to implementation and more automated case management.

Capgemini is well positioned to support government due to:

- **Proven success**: Dedicated Data Science, AI and business analytics teams with experience in developing and implementing fraud and error detection programmes;
- **Service delivery**: Initial assessment, proof of concept, strategic visioning, analysis and modelling incorporating all relevant components across the system;
- A **collaborative approach** which enables the solution to meet the clients needs with a tailored product
- **A large Talent** pool with fraud skills and experience.

3 Our Approach

Capgemini can support government to establish a **fraud and error capability** through one or more phases.

Stage 1: Value discovery & operating model

- During this stage Capgemini would collaborate to create a capability vision, roadmap and target operating model. New rules would be developed, the business case will be strengthened to determine the value of advanced fraud and error analytical methods and identify change implications.

Stage 2: Initial trial phase

- A Data Science /AI team would trial campaigns and new interventions on a single funding stream or customer segment. This phase can also incorporate enabling the initial roll out of case referral and management system.

Stage 3: Phase 1 release

- The core capability would be built and may consist of one or more of the following: a data warehouse, network production, social network analysis, anomaly detection and case referral & management. Some of the key benefits and outputs include the extension of the risk rules, completion of case management roll out, feedback governance and the restructuring of the risk unit.

Stage 4: Phase 2 release

- The second release would help to reduce latency, include more data sources, storage etc. and improved analytical models.

Stage 5: Phase 3 release

- The final phase would help the buyer increase the capability even further with upstream predictive analytics, ability to work with unstructured or semi-structured data, text mining and sentiment analysis.

The use of advanced analytics can play a critical role in the fight against fraud and application error to avoid incorrect payment of funding and recovery management. Effective up stream analytics can ensure that funding only goes to those that are eligible, which is even more pertinent during times of austerity.

It is not enough to implement data modelling, technology and analytics solutions alone. Capgemini's wealth of experience delivering Fraud Analytics to transactional departments has proven that delivering benefits also requires customers to implement changes in core operational processes and will only succeed when the following factors are brought together:

- A technology approach which balances the use of the latest tools and platforms (AWS, Azure, Google Cloud) with the need to provide secure, robust, enterprise-level services;
- Collaborative delivery using a proven methods and templates, that start small, prove value, then scale fast, usually conforming to GDS phases;
- An integrated business design and business change approach that can connect delivery with public sector constraints and embed the change in business-as-usual;
- Innovation embedded in daily practices and 'outside in' thinking;

3.1 Cloud-based Technology

The technology environment is moving fast, and so are Capgemini's skills and capabilities. Technology choices for fraud analytics should initially focus on the exploratory needs of Discovery-style activities and value proofing, yet with an ever-growing consideration on delivering enterprise-scale, robust, secure services.

Capgemini's cloud credentials are significant, for instance Capgemini architected and built UK Government's largest cloud transformation projects at the Home Office. Capgemini's Data Engineering community has built and deployed solutions into production that exploit open source and native capabilities across AWS and Azure and GCP environments. Capgemini have strong partnerships with leading cloud vendors including AWS, Microsoft, Google, Palantir, Databricks, and Salesforce allowing Capgemini teams to expedite deployment time and leverage direct support (See section 9).

Irrespective of platform, Capgemini routinely works with clients to deliver a pragmatic and performant technology blend that mixes products that are free and open source, open source with support wrappers, commercial off the shelf, licensed, and pay-per-consumption. Choosing the right technologies requires extensive knowledge of available tools and emerging technologies, balancing the benefits of established, mature and stable products, as well as those that are compliant with various security or support requirements as necessary.

3.2 Collaborative Delivery

Capgemini's collaborative business experience aims at a collaborative, responsive but controlled approach fully aligned with the Government Digital Service (GDS) model. The approach includes a set of templates which can integrate data science, data management, technology, business design and business change throughout the lifecycle. Capgemini is well versed in developing in a user-centric style with full appreciation of user needs, and has developed many products that have successfully passed GDS service assessments.

3.3 Integrated Business Change

Capgemini's approach recognises that data science, big data and technology can deliver insights – but that delivering benefits from those insights needs an additional focus on business change right from the start. And sustaining those benefits into the future requires that the customer's in-house analytics capability is developed.

Capgemini can offer a dual-speed business change approach which balances organisation-level business change and in-house capability development and business change integrated with teams. The role of fraud analytics would be defined in a high-level concept which shows the relationship of assurance scoring with the key aspects of the organisation's operating model and highlights the specific capabilities required to support and improve assurance scoring. The detail would then fill out as part of the overall business change process. This approach can provide clear focus and direction and also supports the dynamic 'test and learn' approach.

3.4 Innovation

Organisations often find it difficult to understand the possibilities of a fraud analytics approach, so Capgemini's routine practices are to progress through Discovery, Alpha, etc. GDS phases, showcasing the potential for these techniques to add actionable and tangible benefits or efficiencies to the organisation. If necessary, prior to this, Capgemini can also offer an initial Innovation service which can help bring together stakeholders to discuss the 'art of the possible' for Fraud modelling, analytics and data matching, investigating ideas and generating a prioritised list of options for a discovery phase.

4 Buyer Responsibilities

Please refer to the Supplier Terms listed with this service on the Platform. These may contain additional Buyer obligations/costs the Buyer is subject to that are not identified anywhere else in the Supplier's Application or on the Platform.

The Buyer responsibilities as part of this service are as follows:

- Buyer must ensure a project owner is available and empowered to make decisions when requested by the project delivery team, in a timely fashion.
- Buyer must ensure that changes to project goals are documented and communicated to the project delivery team, in a timely fashion.
- Buyer should ensure that the project owner attends regular project progress meetings.
- Buyer must provide access to the necessary data owners and documentation for the data sources involved.

If these responsibilities do not match your expectations, then please contact us in order that we can explore options to vary our approach.

5 Service Management

Not applicable

6 Protection of Data

This service is based on a security classification of 'Official', however should you have a requirement for a different security classification that you would like us to consider, please contact us to discuss.

7 On-boarding and Off-boarding

Capgemini shall undertake on-boarding and off-boarding activities agreed within the Order Form (including as a minimum an exit plan in line with the Call-Off Contract terms) which will be charged for in accordance with the Pricing section for this service.

8 Skills and Knowledge Transfer

Capgemini recognises that skills and knowledge transfer is a critical element in the provision of G-Cloud services to public sector clients. Where possible and applicable, this forms part of the delivery plan for the service agreed at the start of the engagement. Our consultants and engineers are experienced in providing skills and knowledge transfer for major private and public sector clients.

Where appropriate, we may use a standard approach, tailored to topic, skills-gap and individual, to ensure consistency and effectiveness. The approach, Capgemini's Assess-Plan-Implement framework, has been used repeatedly by our teams to structure the work involved in transferring skills and creating new teams capable of driving and sustaining change long after the end of the formal programme. The framework can be applied throughout a project to understand knowledge transfer objectives, plan training delivery methods and materials, and deliver and evaluate success.

9 Vendor Accreditations/Awards

For the 13th year in a row, Capgemini has been recognized as one of the World's Most Ethical Companies® by the Ethisphere® Institute. This is an acknowledgment of our ethical culture that makes us an employer of choice and responsible player in the eyes of our clients, shareholders, and the wider community.

- 2025 Google Global Industry Solution Partner of the year Award
- 2023 AWS GSI AI/ML Partner of the Year – Global
- 2025 Capgemini is identified as a leader in NelsonHall's NEAT Evaluation in AI & Analytics area of Core Banking Services
- 2024 Capgemini named as a leader & a star performer in Everest Group Data & Analytics (D&A) Services PEAK Matrix Assessment

10 Sub-contractors

Capgemini UK may use the following subcontractors to deliver this service:

- Capgemini Technology Services India Limited.

11 Business Continuity and Disaster Recovery

No disaster recovery plan is provided as part of these Services.

12 Pricing

This service is priced in accordance with the SFIA Rate Card attached. Capgemini can also provide offshore resources at reduced rates where appropriate. Projects can be priced either on a Time & Materials or Fixed Price basis.

13 Ordering and Invoicing

Please refer to the Supplier Terms for this service.

We would be pleased to arrange a call or meeting to discuss your requirements of our service in more detail.

14 Termination Terms

Please refer to the Supplier Terms for this service.

15 Further Information

For more information about this or any of our G-Cloud services, please contact our Public Sector Team.

Phone: 0370 904 4858

Email: publicsector.opps.uk@capgemini.com including the following information:

1. The name of this service.
2. The name of your organisation.
3. Your name and contact details.
4. A brief description of your business situation.
5. Your preferred timescales for starting the work.

About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, generative AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2024 global revenues of €22.1 billion.

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