

Data Science and AI: Assurance Scoring G-Cloud 15





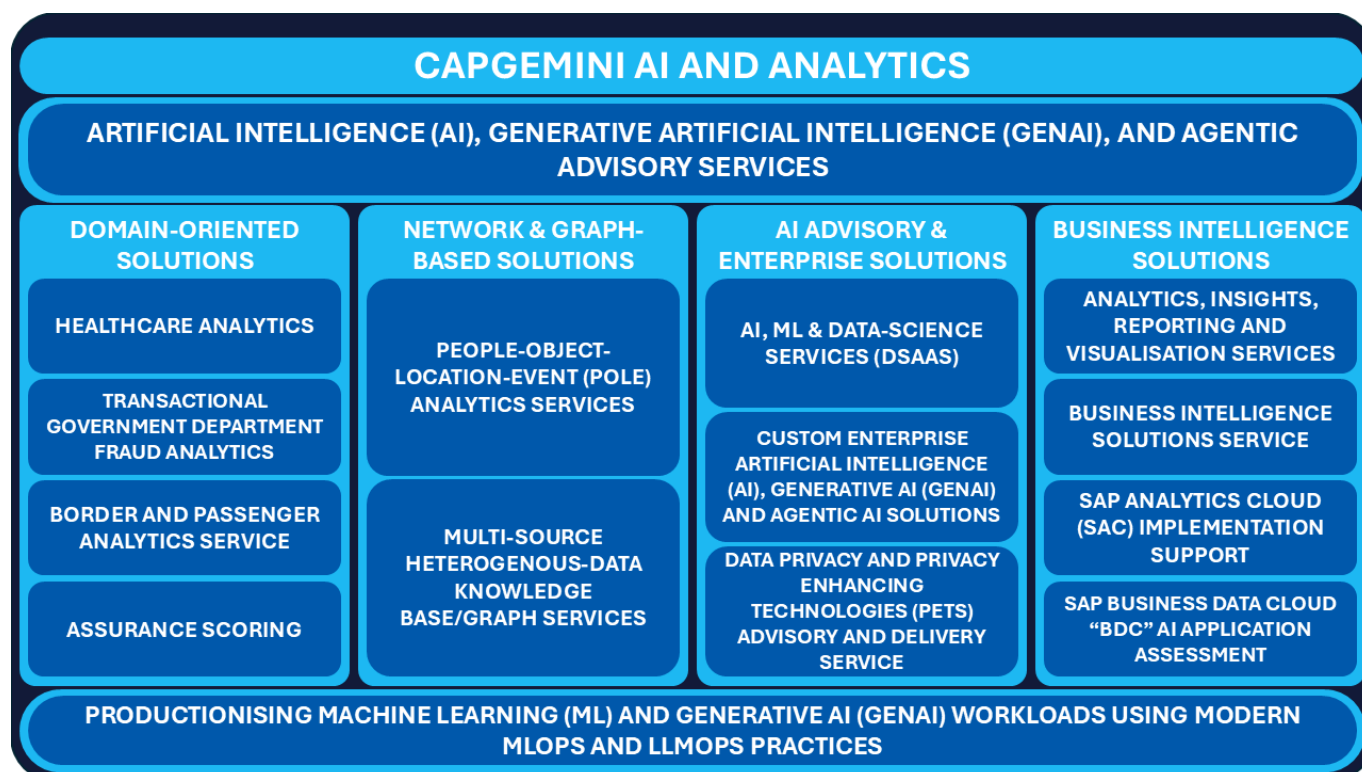
Table of Contents

1	Service Overview	3
2	Business Need	4
3	Our Approach.....	5
3.1	Enterprise Data Science	5
3.2	Cloud-based Technology.....	7
3.3	Collaborative Delivery	7
3.4	Integrated Business Change	7
3.5	Innovation	7
3.6	Services.....	8
4	Buyer Responsibilities	8
5	Service Management	8
6	Protection of Data	8
7	On-boarding and Off-boarding	9
8	Skills and Knowledge Transfer	9
9	Vendor Accreditations/Awards	9
10	Sub-contractors	10
11	Business Continuity and Disaster Recovery	10
12	Pricing	10
13	Ordering and Invoicing	10
14	Termination Terms	10
15	Further Information	10



1 Service Overview

Capgemini is one of the leaders in the provision of Data Science, Analytics and AI Engineering capabilities and has several service offerings available on G-Cloud as illustrated below.



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

Capgemini's Assurance Scoring service uses proven Data Science and Artificial Intelligence (AI) techniques to find previously unknown patterns in large volumes of data, that enables the prediction of probable future behaviours, events, outcomes and levels of risk.

For example, by applying supervised machine learning to historical patterns in previous visa/license/passport/benefit applications, Assurance Scoring identifies the attributes that separate successful applicants from non-successful applicants, enabling the development of predictive algorithms for future outcomes.

The implementation of assurance scoring can enable:

- Cost reductions in the processing of low risk applications for government services

Improved customer service for low risk cases;

- Better triaging, targeting and faster resolution of higher risk cases including routing to specialist staff.

Assurance Scoring can be applied to streamline application processing for government services (such as visas, passports and benefit applications), identifying the need for targeted/customised interaction with customers (online or offline), and differentiating transactions such as case-work to target non-compliance and fraud.

Assurance Scoring can enable negligible risk cases to be automated and an appropriate level of checking to be applied to others. Decisions which involve an assessment of risk are widespread in the public sector and this data driven approach to decision-making has the potential to deliver a wide range of benefits.

Capgemini's Assurance Scoring services can enable organisations to understand the decisions for which Assurance Scoring can deliver the greatest benefit, and then support the delivery of those benefits.



This service can offer the following:

- Scrum leadership to manage the backlog and sprint team/s;
- Business analysis to work with the buyer's product owners to define requirements and agree backlog priorities;
- Platform engineering to configure the big data and Data Science platform, locally or Cloud-hosted
- Big data engineering to ingest, process and structure data from diverse sources
- Probabilistic matching of data (e.g. to build up a total view of an applicant's transaction history);
- Data science and MLOps expertise to build, test, validate, deploy and monitor Assurance Scoring models through to production;
- Generative AI applications (primarily using Large Language Models (LLMs)) (e.g. to offer a natural language interface to user queries);
- In-built responsible AI safeguards so as to avoid biased and harmful results;
- Upskilling of client resources and complete knowledge transfer;
- Information visualisation and application-building expertise to present insights in an exploitable, actionable form.

2 Business Need

The public sector is under pressure to address a series of critical challenges, notably:

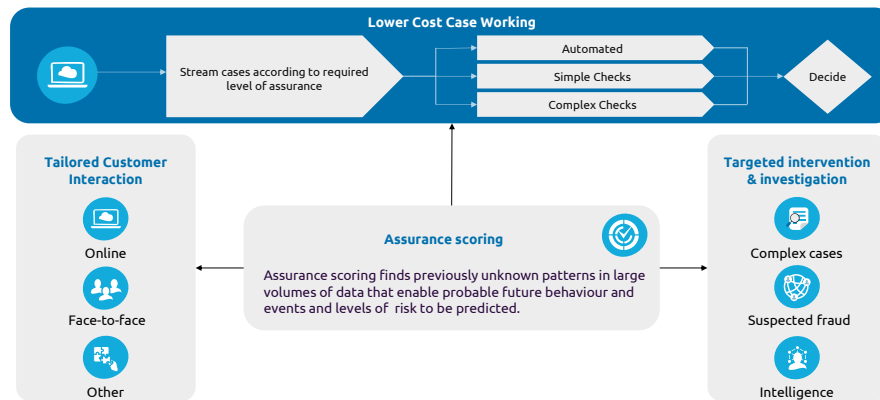
- Reduce budgets;
- Improve productivity;
- Deliver policy more effectively;
- Provide improved customer experience, such as reduced waiting times;
- Deliver future visions and 'Digital First' agendas (e.g. 'NHS Long Term Plan')

Assurance scoring, as part of an overall predictive analytics approach, can help deliver on these objectives.

As shown in the diagram below, Assurance Scoring, within an overall digital approach and linked fully into digital channels, can help to differentiate transactions to:

- Improve efficiency and reduce the cost of service through triage and queue management;
- Enable continuous improvement of service delivery;
- Support flexible resourcing of case-work;
- Understand citizen behaviour and, as a result, improve the experience for compliant service recipients and improve targeting of others;
- Reduce levels of fraud and error;
- Improve enforcement of policy through improved understanding and insight;
- Improve the maturity of government analytics;
- Enable customer interaction and the associated case-working processes to be tailored to the circumstances of the customer.

As a result, assurance scoring can help clients reduce cost, enable more effective delivery of policy and enable compliant customers to receive a better service and improved customer experience.



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

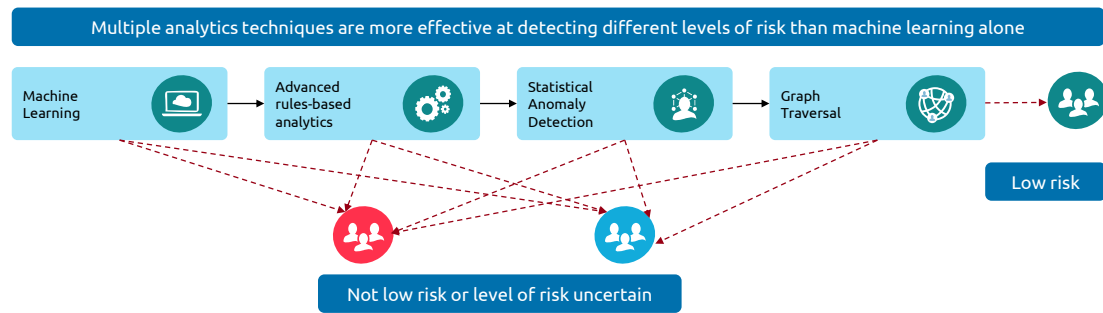
3 Our Approach

It is not enough just to implement Data Science and AI approaches and technology. Delivering benefits also requires customers to implement changes in core operational processes and will only succeed when the following factors are brought together:

- Data science expertise to recognise and unlock the value in data that will justify the business change required, delivering robust, ethical, transparent insights that enable the enterprise;
- 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 proven methods and templates;
- Listening to subject matter experts (SMEs) and incorporating their expertise into models;
- An integrated business design and business change approach that can connect delivery with public sector constraints and embed the change in business-as-usual;
- Design thinking using a user-centred design approach to create products that truly make the users' work life easier;
- Innovation embedded in daily practices and 'outside in' thinking.
- Adoption of Machine Learning Operations (MLOps) to complement DevOps processes to enable Continuous Integration (CI), Continuous Deployment (CD) and Continuous Training (CT) throughout the delivery lifecycle.

3.1 Enterprise Data Science

Deriving value from Data Science and AI requires a combination of different data sources and the application of a wide range of techniques. Our Assurance Scoring approach typically begins with machine learning and advanced statistics, but then, as illustrated in the diagram below, Capgemini can introduce a range of other techniques to create insight frameworks much more powerful and reliable than machine learning on its own. This can also be combined with human-in-the-loop oversight to further refine the solution. This approach ensures a robust and reliable mechanism for assessing the level of risk, compliance etc., as required of the Assurance Scoring solution.



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

The constituent techniques in the diagram above are tailored in each application of Assurance Scoring, however often feature:

- Machine Learning:
 - Build, test and validation of classification models to predict future outcomes.
 - Exploitation of a range of appropriate ML techniques, including supervised machine learning
 - Balancing model 'explainability' and performance
 - Regularly assessing model drift to ensure sustained accuracy and relevance
 - Measured through business-interpretable metrics
- Advanced Rules-Based Analytics:
 - Highlighting immediate behaviours prior to a 'history' being established, e.g. changing underlying 'population' behaviours
 - Isolating cases which breach an immediate-term threshold, e.g. number of concurrent transactions per person
 - Codification of client intelligence or business initiatives, e.g. emerging threat relating to...
- Anomaly Detection
 - Identifying observations which differ significantly from the majority of the data, as an indicator of exceptional behaviour
 - Enables focussed scrutiny, or immediate streaming to appropriate channel
 - Highlighting sudden change in inbound population e.g. sudden influx of transactions sharing a related entity
 - Eliminating cases that may warrant no further attention e.g. eliminating flight crew as uninteresting group travellers
- Generative AI applications:
 - Integrating LLMs into natural language understanding pipelines for tasks such as sentiment analysis, summarisation, and question-answering from end-users as well as analysts
 - Integrating multi-modal models into automated verification systems to evaluate the authenticity and accuracy of user-submitted content
- Responsible AI:
 - Capgemini knows that checks can appear invasive and opaque – Capgemini offer explainable machine learning methods always aiming for minimal sensitive information use possible
 - Ability to monitor core metrics (e.g. demographic parity) as well as the deciding factors for the produced model outputs
- Graph Analytics



- Adding the dimension of interconnected entities, including second- and third- order links, including overlapping time attributes where relevant e.g. shared address with previous fraudster, or multiple common relationships, or considering shared-entity behaviour.
- Influencing based on graph position, e.g. connectedness of an entity (e.g. person) to the wider network.
- Influencing model output decisions based on graph relationships, e.g. treating transactions case-by-case vs. looking at all transactions made by one person, or treating an application at the group-level as opposed to family (where the influence of a criminal in the family group may be included for consideration).

3.2 Cloud-based Technology

The technology environment is moving fast, and so are our skills and proven capability. A technology choice for enterprise data science should combine the exploratory needs of data science with the need to deliver enterprise-scale, robust, secure services.

Our cloud credentials are significant, for instance Capgemini architected and built UK Government's largest cloud transformation projects at Home Office. Our Data Science and AI Engineering community has built and deployed Data Science solutions into production that exploit open source or native capabilities across AWS, Azure and Google Cloud providers, for instance Databricks, Sagemaker or Azure Machine Learning.

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.

3.3 Collaborative Delivery

Capgemini's delivery is 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.

3.4 Integrated Business Change

Capgemini's approach recognises that data science, big data and technology can deliver insights but delivering benefits from those insights needs an additional focus on business change right from the start. 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 assurance scoring 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.

3.5 Innovation

Stakeholders often find it difficult to understand the possibilities of a Border Control Management Analytics approach, so Capgemini's routine practices are to progress through GDS phases i.e. Discovery, Alpha, etc., 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 BCMA modelling, analytics and data matching, investigating ideas and generating a prioritised list of options for a discovery phase.



3.6 Services

The approach can offer the following services:

- Innovation: to create insights and shape a discovery phase;
- DS/AI delivery services and management: to plan and manage all of the activities through the GDS phases and enable the assurance scoring solution to be delivered, supported and embedded in the organisation;
- Agility in solution delivery: management, business analysis, data science, data management, development/support, testing, architecture and service management as required through the phases;
- Dual-speed business change: to support business change at the organisation level and within delivery using Capgemini's templates, such as:
 - Business concept design;
 - Benefits management and realisation;
 - Communications and engagement;
 - Organisation change and readiness;
 - Education and training.

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.

If these responsibilities do not match Buyer's expectations, then please contact Capgemini in order that options can be explored to vary the approach.

5 Service Management

Not applicable.

6 Protection of Data

This service is based on a security classification of 'Official', however we have experience designing and building DS capability at higher classification levels; 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

Prior to the execution of the Order, the Supplier and the Buyer will agree the scope of the exit plan for the Services and a timescale for delivering an exit plan to ensure continuity of service.

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.

- Diamond Partner with Oracle
- Gold Partner with Microsoft
- Global Platinum Partner with SAP
- Global Strategic Partner with SAS
- Global Partner with IBM and QlikView
- Data / BI /AI Practice well recognised by industry analysts
 - positioned as a Leader for the third year in a row, in Gartner's Magic Quadrant for Data and Analytics Service Providers, Worldwide
 - named a Leader in IDC's MarketScape Worldwide Business Analytics Consulting and Systems Integration Services 2020 Vendor Assessment
 - positioned as a Leader in Everest Group's PEAK Matrix assessment for Data & Analytics (D&A)
 - identified as a Leader in Nelson Hall's NEAT vendor evaluation for GDPR Services in the overall market segment.



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.

Make it real. | www.capgemini.com



This presentation contains information that may be privileged or confidential and is the property of the Capgemini Group.

Copyright © 2026 Capgemini. All rights reserved.