

The Analysis Function in Government



Better Analysis, Better Delivery for the UK

The Analysis Function provides best practice research and analysis services within government. It is a collaboration between several analytical professions, who collectively support all civil servants, including the most senior in government to make informed decisions.

Our aim is to help everyone working in government easily access the advice, analysis, research and evidence they need, using our consistent, professional standards.

Our mission is to support all Government Functions to make better decisions and improve outcomes for the people of the UK.

Diagram 1 shows the analytical professions that make up the Analysis Function. As specialists within the Function, professional actuaries¹, economists, engineers, operational researchers, scientists, social researchers, statisticians as well as data scientists all use research, evidence and data to advise government on the best use of public resources.

By drawing together the shared standards and skills of analytical professions the value of the Functional approach becomes apparent. Working collaboratively supports analysts to reach their highest potential. Facilitating cross-profession lateral moves (where appropriate) is a priority of the Function to achieve this aim.

¹ The specialist Actuary profession (GAD) pathway and role information is currently being signed off by the profession and will be added when it is available.

Civil Service Grade	DDAT Digital Data & Technology	GES Government Economic Service	GORS Government Operational Research Service	GSE Government Science & Engineering	GSR Government Social Research	GSS Government Statistician Group
Director General SCS3	Head of Data Science	Director General	GORS Grade 5 / Chief Operational Analyst	Departmental Head of Science and Engineering Profession / Chief Scientist	Chief Social Researcher	Chief Statistician
Director of Analysis SCS2		Director of Analysis				
SCS1 Deputy Director		Chief Economist Deputy Chief Economist				
Grade 6	Senior Data Scientist	Deputy Chief Economist Senior Economic Advisor	GORS Grade 6	Deep Specialist Specialist Policy Roles Generalist 	Senior Principal Research Officer	Senior Principal Statistician
Grade 7	Data Scientist	Economic Advisor	GORS Grade 7		Principal Research Officer	Principal Statistician
SEO	Data Scientist	Senior Assistant Economist	GORS Level 3		Science & Engineering Fast streamer	Senior Research Officer
HEO	Junior Data Scientist	Assistant Economist	GORS Level 2	Research Officer		Higher Statistical Officer
AO/EO	Trainee Data Scientist	Student placement / Intern Economist	Temporary Operational Analyst / Student Placement	Student placement		Temporary Statistical Officer / Student Placement

DDAT Fast streamer

Assistant Economist (GES Fast streamer)

GORS Fast streamer

Science & Engineering Fast streamer

GSR Fast streamer

GSS Fast streamer



Digital, Data and Technology Profession

The Digital Data & Technology Profession work collaboratively across government to facilitate the development of an integrated offer that helps departments attract, develop and retain the people and skills they need in digital, data and technology. Within DDAT, specialist roles are defined - Data Scientists in DDAT are included under the Analytical Function.

A data scientist identifies complex business problems whilst leveraging data value. They work as part of a multidisciplinary team with data architects, data engineers, analysts and others.

Digital Data & Technology

Description & Responsibilities of Grade

Trainee Data Scientist

A trainee data scientist is given an experience of practical data science work under supervision from more senior colleagues.

- Trainee data scientists move from a strong awareness of the core data science skills of coding, machine learning and statistics to a more effective working knowledge. They develop their understanding of how to apply data science to business problems.
- A trainee data scientist needs specific skills and capabilities, like data science innovation and domain expertise as well as general Civil Service competencies, like collaborating and partnering
- The full list of capabilities and competencies is available on gov.uk

Digital Data & Technology

Description & Responsibilities of Grade

Junior Data Scientist

A junior data scientist is responsible for aspects of existing data science projects. Junior Data Scientists:

- gain valuable hands-on experience working on data science projects
- are able to apply certain data science techniques and work to develop their technical ability
- provide limited advice on data science projects within teams
- identify and communicate lessons learnt during projects and follow good practice
- clearly communicate the value of data science work to stakeholders
- The full list of capabilities and competencies is available on gov.uk



Digital Data & Technology

Description & Responsibilities of Grade

Data Scientist

A data scientist is proficient in data science. Data scientists:

- have recognised technical ability in a number of data science specialisms and provide detailed technical advice on their area of expertise
 - promote and present data science work both within and outside of the organisation
 - engage with stakeholders and champion the value of data science work
 - line manage and mentor junior data scientists
 - manage small project teams
 - The full list of capabilities and competencies is available on [gov.uk](https://www.gov.uk)
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Digital Data & Technology

Description & Responsibilities of Grade

Data Scientist

A Grade 7 Data Scientist is an expert data scientist who provides support and guidance to teams. Senior Data scientists:

- are a recognised authority on a number of data science specialisms within government, with some knowledge of cutting edge techniques
 - engage with senior stakeholders and champion the value of data science
 - line manage more junior colleagues
 - communicate the value of data science to senior stakeholders
 - The full list of capabilities and competencies is available on [gov.uk](https://www.gov.uk)
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Digital Data & Technology

Description & Responsibilities of Grade

Senior Data Scientist

A Grade 6 Senior Data Scientist provides leadership and direction across a programme of multidisciplinary data science projects, managing resources to ensure delivery. Heads of data science:

- are recognised as strategic authorities with technical expertise in cutting edge techniques, defining vision across the organisation
 - are role models to other data scientists and champion adoption of best practice
 - communicate with senior stakeholders and convince them of the strategic value of applying data science
 - The full list of capabilities and competencies is available on [gov.uk](https://www.gov.uk)
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Digital, Data and
Technology Profession



Government
Economic
Service



GSE
Government
Science &
Engineering



Government
Statistician Group





The Government Economic Service is the professional body for economists in the UK public sector. Economics is about decision-making on the basis of analysis and evidence, using explicit weightings on both ethical considerations and expected outcomes. The GES Competency Framework and Core Syllabus sets out the standards for skills and knowledge that underpin the profession, and applies to all Economists.

Government Economic Service	Description & Responsibilities of Grade
Placement Student/Intern Economist	<p>Placement students are sandwich course students who take an academic year away from university to work in the role of a government economist for 12 months. The aim of a placement student is to take on a job role that is at a comparable level to Assistant Economists</p> <ul style="list-style-type: none">• Will learn to apply economic concepts and tools/methodologies to a range of practical, real world problems.• Different roles require different skills and provide opportunities for the development of a range of new skills, both technical and softer: may be involved in policy analysis, preparing impact assessments (for policy/legislative changes), helping to prepare briefing notes and submissions to ministers, or preparing forecasts to feed into fiscal events, such as the Autumn Statement or Budget. Every role is dynamic and evolves throughout the year due to changes in the political climate, and how the placement student develops as an economist.• Are given wide development opportunities varying from communication with important stakeholders, to leadership skills, to statistical software training.

Government Economic Service	Description & Responsibilities of Grade
Assistant Economist (GES Fast Stream)	<ul style="list-style-type: none"> Assistant economists will learn to apply economic concepts and tools/methodologies to a range of practical, real world problems.
Assistant Economist / Senior Assistant Economist	<ul style="list-style-type: none"> Different roles require different skills and provide opportunities for the development of new skills: you may be involved in economic appraisal for investments, preparing impact assessments (for policy/legislative changes), help prepare briefing notes and submissions to ministers, or work on a range of projects. Build skills in effectively communicating analysis to a range of customers/stakeholders, including non-analysts. This involves conveying technical concepts into 'layman' terms.

Government Economic Service	Description & Responsibilities of Grade
Economic Advisor	<p>Economic Advisers lead on analytical projects and deliver impact by influencing policy decisions using in-depth economic theory and analysis.</p> <ul style="list-style-type: none"> In addition to effectively communicating economic concepts to non-economists, Economic Advisers engage with all relevant stakeholders to ensure evidence-based decision-making is at the heart of the policy design. Economic Advisers are responsible for delivering results; managing team performance, placing a high importance on quality and prioritising work streams as required. Economic Adviser roles can vary in their technical skill requirements, extent of application of core economic theory and people management responsibilities.

Government Economic Service **Description & Responsibilities of Grade**

Senior Economic Advisor

Often lead larger teams of economists or multidisciplinary teams working on a portfolio of related analytical projects and deliver impact by using both in-depth economic theory as well as the insights gained from other analytical professions.

- Engage with, and frequently manage analysts from other professional disciplines and take a leading role in engaging with relevant stakeholders to ensure evidence-based decision-making is at the heart of policy design.
- Deliver results through G7-led teams by seeing the connections and the bigger picture. While they may do less analysis themselves, they are more likely to be involved in wider decisions about prioritising work streams and staff resources.

Government Economic Service **Description & Responsibilities of Grade**

Chief Economist

An SCS grade economist has a greater amount of leadership and management responsibilities compared to the previous grade. A key difference is the level of engagement required with ministers, the executive team and the permanent secretary. As a result, there is less focus on using economics, and more focus on how economists can work effectively with other professions, and how to make the best use of economics.

- The role itself involves leading by setting the strategic direction for analytical teams and aligning work to departmental and ministerial priorities.
- Compared to the previous grade, there is greater impetus on making the case for economics in the policy-making process, having a broader understanding of economics as well as experience to best advise on how to tackle problems. The role also involves more quality assurance, which utilises accrued experience.



Operational Research provides a clear understanding of problems and applies mathematical, scientific and facilitative methods to analyse a wide range of real-world issues. Analysts offer rigorous, objective and practical analytical support to decision makers.

Operational research is about working with policy makers and managers to solve tomorrow’s problems today. It calls for scientific methods of analysis and a systematic exploration of the quantifiable aspects of problems.

Government Operational Research	Description & Responsibilities of Grade
GORS Placement Student	<ul style="list-style-type: none"> • Seeks opportunities to learn from colleagues. • Takes seriously own professional development. • Operates with professionalism and integrity in all aspects of analytical work including conduct, adherence to Codes of practice and working in best interests of the Department. Maintains best practice and works to Departmental standards. • Demonstrates importance of quality assurance checks through building them into own work, securing assistance from peers and more senior colleagues. Raises and escalates risks where identified.

Government Operational Research	Description & Responsibilities of Grade
GORS Level 1	<ul style="list-style-type: none"> • Participates in wider Department OR and GORS activities and builds professional networks. • Takes seriously own professional development and undertakes 100 hours of continuous professional development per year. • Provides quality and product assurance for others, escalate risks if quality and product assurance is compromised.

Government Operational Research	Description & Responsibilities of Grade
GORS Level 2	<ul style="list-style-type: none"> • Provides induction to junior staff on the role of OR within the Department and business area. • Provides guidance to junior staff on how to get the most out of their training and professional development. • Contributes to wider GORS activities and builds analytical professional networks. • Displays professionalism and uses best practice in the performing and communication of analytical work • Make suggestions on areas where OR could make a contribution to own team’s work. • Carries out robust quality assurance on analytical work and ensures that products are fit for purpose and are used to best effect.

Government Operational Research	Description & Responsibilities of Grade
GORS level 3	<ul style="list-style-type: none"> • Supports the direction for OR professionals across the business area and supports the Departmental OR community. • Contributes to wider GORS activities and extends professional networks across the analytical professions and broader department. • Promotes professionalism and exemplifies best practice in the performing and communication of analytical work. Ensures that projects are managed well, and fully documented. • Allocates time for and makes sure that appropriate quality assurance is carried out and engages with customers so that they understand the level off assurance provided, and limitations and caveats of the analysis. • Suggests and makes effective use of opportunities to promote the OR profession within the business area, seeking out areas where OR can make a contribution.

Government Operational Research	Description & Responsibilities of Grade
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GORS Grade 6 &7

- Supports GORS recruitment, induction of high quality OR professionals in the GORS community. Supports progressive professional development, including time to explore the newest techniques and technologies.
- Sets direction for OR professionals across the business area, supports the Dept. OR community and proactively contributes to wider GORS business goals.
- Instils professionalism and integrity in all aspects of analytical work, delivers GORS best practice ensuring that work is appropriately quality assured.
- Promotes OR group's reputation for professionalism, good service, and most advanced analysis; suggests areas where OR can make a contribution.
- Appropriately selects and oversees the work of external OR staff (consultants, academics).
- Develops and agrees quality and product assurance requirements with customers and analysts at the start of analytical projects, building in sufficient time for delivery.
- Manages quality and product assurance issues, escalating to stakeholders and external experts as appropriate.

Government Operational Research	Description & Responsibilities of Grade
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GORS level 5

- Ensures GORS approved, government wide standards for professional OR staff (recruitment, professional development and promotion) are maintained and applied with the Department.
- Ensure active contribution to GORS and Departmental commitment on continuing professional development for OR analysts.
- Leads on the OR capability within the Department through setting the overall direction, identifying future needs, and embracing future advancements seen in OR outside government and in other Government Departments. Works to facilitate, promote, and mainstream GORS professional activities, ensuring OR is recognised within the Department as most current standard of analysis.
- Pushes for the latest appropriate technologies, to enable useful new analytical techniques.

- Ensures that appropriate quality and product assurance processes are in place and are monitored, consulting with stakeholders and external experts when required
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The Government Science and Engineering profession is over 10,000 civil servants with a background or interest in science and engineering who work in a range of deep specialist, specialist, policy, analytical and operational roles. Its vision is to be 'a high profile, proud and effective GSE profession that attracts fresh talent and has a secure place at the heart of government decision making.

Government Science & Engineering

Description & Responsibilities of Grade

Deep Specialist

You have deep specialist skills, knowledge and expertise, in a niche domain or subject area, which may have been built up within their organisation, academia or industry. You may be recognised as a national and/or international expert in your field.

Your role could be lab-based research, a senior technical supervisor role, designing, building, developing and testing new products and systems.

Government Science & Engineering

Description & Responsibilities of Grade

Specialist

You have specialist knowledge and expertise in a particular subject area or discipline. You are developing deep specialist skills, knowledge, and expertise in your chosen area as well as nurturing transferable skills.

Your role may be lab-based, or you may perform technical project management, or intelligent customer and supplier functions.

Government Science & Engineering	Description & Responsibilities of Grade
Policy Roles	<p>You apply your scientific understanding or domain knowledge to add value in your role. Depending on their background and expertise, you could have an affiliation to a professional body or institution, but, many will not, for example, those working in cross-disciplinary areas.</p> <p>You may be working on policies for research funding, universities and innovation, i.e. ‘policy for science’ roles. And/or using evidence and research to deliver better policy in government ‘science for policy.’</p>

Government Science & Engineering	Description & Responsibilities of Grade
Generalist	<p>You may have qualifications in science/engineering, but do not necessarily use them in day-to-day work. You are still interested in the latest developments in science and engineering and connecting with the wider science and engineering community. You may undertake roles across the whole of the Civil Service in corporate services, operational delivery, policy, and regulatory organisations.</p> <p>Depending on your background and expertise, you could have an affiliation to a professional body or institution, but, many will not, for example, those working in cross-disciplinary areas.</p>



Government Social Researchers use the methods of social scientific enquiry – surveys, controlled trials, qualitative research, case studies and analysis of administrative and statistical data – to measure, describe, explain and predict social and economic phenomena to policy makers. Researchers provide government with objective, reliable, relevant and timely social research; support the development, implementation, review and evaluation of policy and delivery; ensure policy debate is informed by the best research evidence and thinking from the social science; provide in-depth data and objective analysis on what people and organisations think, how they behave and why they may not be responding to initiatives as planned; and ensure government and frontline decisions have an understanding of the people and organisations affected by that decision and the wider social consequences

Government Social Research	Description & Responsibilities of Grade
Research Officer	<ul style="list-style-type: none"> • Has good knowledge of research methodology, method, and the latest techniques, (at e.g. degree level 2:1 or 1st) and ability to apply these in small scale research projects. • Is able to design small scale and less complex research projects, defining research questions and writing draft specifications. • Is able to summarise and interpret information accurately, making use of different sources and to conduct basic analyses of key data sets utilising a working knowledge of relevant data analysis packages. • Has good working knowledge of departmental procurement procedures, quality assurance processes, legal and ethical issues and principles relating to social research. Uses ability to critically assess and evaluate information and evidence, to support team members in managing more complex external research projects (judging merits of research tenders, assessing research findings, evaluating new ideas or methodologies. • Persuades others to support the research process and works to increase awareness of cross cutting research possibilities. • Uses understanding of policy context to deliver appropriate and timely analysis and clear reporting of research results, tailored to customer needs.

Government Social Research	Description & Responsibilities of Grade
Senior Research Officer	<ul style="list-style-type: none"> • Demonstrates a thorough knowledge of research methodology, method, and the latest techniques, including main quantitative, qualitative and evaluation methods (at e.g. post graduate level) with at least two years of applied experience. Is up to date with methodological developments. • Holds a track record of designing medium scale or more complex projects, applying best practice guidance, identifying new areas for work, translating policy requirements into robust specifications that will meet customer needs • Is able to accurately evaluate competing data sources and identify salient points and trends to draw sound, logical inferences • Has experience of managing research projects of significant scale, working with other analysts and ensuring • Relevant legal, ethical, procurement, and quality assurance practice followed, ensuring quality of results and methodological rigour. • Communicates analysis of complex information clearly, helping others make good use of social research evidence, even where this is not perfect. • Stimulates interest in social research and contributes effectively to internal and external research projects. • Understands policy context and timescales, explaining different angles critically and analytically, works with other analysts to best meet customer needs.

Government Social Research	Description & Responsibilities of Grade
Principal Research Officer	<ul style="list-style-type: none"> • Holds an established track record (at least four years) in designing, carrying out and managing social research, and providing research based advice and briefings. • Applies understanding of customer needs and ability to see bigger picture to identify research needs and evidence gaps and to deliver effective research designs to meet these needs. • Evaluates and integrates research information from a variety of sources, coming to logical conclusions and communicating this effectively to senior non-specialists, assisting them to take on key findings and implications. • Has strong research commissioning and management experience and ability to develop research

coordination strategy, understanding contribution of other analytical professions.

- Is able to communicate understanding of policy realities while clearly and accurately presenting social research evidence, ensuring appropriate social research input to policy decisions.
- Works in partnership with other analysts within and outside government, and across departments to achieve high quality, robust and relevant input.
- Is an advocate for social research, educates others about social research, and so shapes customer expectations and needs.
- Keeps abreast of new methodological developments, how they might be used within departments and in different policy contexts.

Government Social Research

Description & Responsibilities of Grade

Senior Principal Research Officer

- Applies knowledge to high profile and complex projects, providing a supervisory / sounding board for team leaders where appropriate.
- Improves identification of research need and ability of research work to meet this through effective challenge and promotion of innovative methods and techniques.
- Actively explores different perspectives when evaluating data; consults widely to inform this process.
- Makes use of an established track record in research formulation at the overall programme level.
- Makes timely and objective decisions, based on best available evidence and sound analysis and helps others to draw sound inferences from information.
- Encourages staff to consider new and innovative methods in social research and evaluation.
- Advocates use of social research at the strategic level, developing research strategies, actively exploring and identifying shared interests.
- Ensures programmes of work are closely aligned with customers' strategic objectives.



Government Social Research

Description & Responsibilities of Grade

Chief Research Officer

Ensures high standards for social research, keeping abreast of methodological developments and identifying value to department and across Whitehall.

- Anticipates future needs based on understanding of evidence base.
- Gives advice based on critical evaluation of wide range of research.
- Engagingly and accurately communicates relevant findings from complex research programmes to senior people and influential audiences, to give politically aware advice that informs policy and practice.
- Sets a learning culture for all staff, instilling professional integrity and high professional standards in line with the GSR code, encouraging breadth and depth in research skills including innovative methodologies and techniques and good understanding of other analytical disciplines.
- Demonstrates excellent cross functional awareness, making use of different analytical disciplines to deliver robust solutions, collaborating with senior analysts and policy colleagues to develop a coherent and integrated research vision that reflects the contribution of each analytical discipline and meets customer needs
- Champions excellence in social research practices and application, creates intelligent customers and builds customer base, builds and maintains influential relationships with the 'top of the office' and key stakeholders outside government, presenting a compelling case for the value of social research.
- Uses understanding of evidence base, policy area and customers' priorities to influence research priorities. Ensures policy and political implications of research are understood and managed, develops policy / delivery action plans in partnership with customers and ensures research capability and evidence base is relevant to short term and strategic priorities of key customers.





The Government Statistician Group (GSG) is the civil service profession for statisticians and data scientists. Statisticians work in government as analysts, producers of official statistics and data scientists. In all of their job roles they use their [recognised professional standards](#) to ensure the quality and integrity of their work. The [Statistician and Data Scientist career pathway](#) gives further guidance.

The profession works within the Government Statistical Service (GSS), the community for all civil servants working in the collection, production and communication of official statistics.

Government Statistician Group	Description & Responsibilities of Grade
Placement Students / Statistical Officer / Trainee Data Scientist	Placement students are sandwich course students who take an academic year away from university to work in the role of a government statistician for 12 months. The aim of a placement student is to take on a job role that is at a comparable level to a Statistical Officer. Statisticians at this level can expect: <ul style="list-style-type: none"> • To be supervised by more senior statisticians/ data scientists • To be responsible for own work and contributes to statistical or data science production • To gain experience working within a statistical or data science role using formal statistical qualifications gained from previous education or experience • To develop strong working knowledge of tools and methods. • Expected to fulfil Level 1 of the statistical competency framework

Government Statistician Group	Description & Responsibilities of Grade
Higher Statistical Officer / Junior Data Scientist	<ul style="list-style-type: none"> • Responsible for aspects of statistical production or data science projects • May manage junior grades including non- analysts • Able to communicate and champion statistics or data scientists in their own area of work • Continues to develop their technical skills • Expected to fulfil Level 2 of the statistical competency framework

Government Statistician Group **Description & Responsibilities of Grade**

- Senior Statistical Officer / Data Scientist**
- Responsible for multiple aspects of statistical production or data science analytical projects
 - Often manages teams of analysts and non- analysts
 - Can develop expertise in technical skills through further training /qualifications
 - [Expected to fulfil Level 2 of the statistical competency framework](#)
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Government Statistician Group **Description & Responsibilities of Grade**

- Principal Statistician / Senior Data Scientist**
- Head of statistical/data science teams, responsible for statistical/data science production or areas.
 - Are often regarded as topic experts and champions for their topic area, and their team’s work.
 - Can develop expertise in technical skills through further training /qualifications
 - [Expected to fulfil Level 3 of the statistical competency framework](#)
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Government Statistician Group **Description & Responsibilities of Grade**

- Senior Principal Statistician / Principal Data Scientist**
- Head of multiple statistical or data science teams, responsible for whole programs of statistical and data science work
 - Have an overview of the statistical, data and political environment and are champions for the use of statistics and data science across government.
 - [Expected to fulfil Level 3 of the statistical competency framework](#)
-