Statistical leadership

Making analytical insight count

February 2021

Foreword

Data and analysis are fundamental to understanding and addressing many of society's most important issues. This has never been more apparent than during the coronavirus pandemic. Data and analysis inform individuals' decisions, for example on whether to send their children to school or spend time with family. They inform governments' decisions, such as how to determine restrictions which best balance hospital capacity and economic impact. And of course, questions which matter to society are much broader than the pandemic, such as: How many people are homeless? How is the population changing? How big is the economy?

Effective statistical leadership by governments across the UK is essential to help answer these important questions and support society's need for information. Statistical leadership can help ensure the right data and analysis exist, that they are used at the right time to inform decisions, and that they are communicated clearly and transparently in a way that supports confidence in the data and decisions made on the basis of them.

Statistical leadership is not just about the most senior statisticians – as important as they are. Governments must show statistical leadership from the most junior analysts producing statistics to the most senior Ministers quoting statistics in parliaments and the media.

Governments need senior leaders who champion the use of evidence. Senior leaders should build a culture which values analytical insights, supports innovation and involves analysts early in development of policies and systems. Those speaking on behalf of government must communicate statistics in a way that commands confidence in the statistics and organisations using them and helps those listening understand the key messages.

Governments needs statisticians who are technically capable, understand the broader context of their work and are effective communicators. Statisticians in governments need an environment in which they can engage widely within and outside government, to support collaboration, innovation and effective communication. Statisticians also need a culture which empowers them to show leadership, enables them to feel positive about career prospects, and fosters an inclusive and diverse workforce.

Through our review we have identified recommendations to develop statistical leadership in government. This report represents a starting point, which we hope to build on by engaging across organisations and professions to highlight the issues outlined and realise our ambition to strengthen statistical leadership so that statistics and data can best serve the public good.

Ed Humpherson

Director General, Office for Statistics Regulation

1. Executive summary

This report sets out the findings from our review of statistical leadership. It looks at how statistical leadership can be strengthened across government.

Strong statistical leadership is essential to ensuring statistics serve the public good. Many decisions draw on statistics published by governments across the UK. Successful implementation of government policies can be dependent on public confidence in the data and messages shared by government. Individuals need to be confident in the data and associated narratives in order to make decisions which impact on their lives, business, or charities.

Governments need to be role models for statistical leadership. They need statisticians who can show leadership within the profession and across their organisations, and officials who can champion the use of evidence and be confident in engaging with analytical experts. All those with public facing roles must be capable of communicating messages drawing on data to support public confidence in data and how they have been used.

Our review identified two focus areas, each supported by two outcomes that we would like to see realised. The table below sets out these outcomes and a summary of our views.

Statistics, data and analysis are used effectively to inform government decisions and support society's information needs

The value of data and analysis is understood by influencers and decision makers, and they see the benefits of having statisticians at the table	• We have seen positive examples of strong statistical leadership from within and outside the statistics profession during the pandemic. • To make this more widespread, senior leaders should promote a culture which values good use of evidence and seeks input and independent insight from statisticians and analysts. While statisticians must be engaged in policy and understand the context of their work.
People have confidence in the statistical system and its ability to answer society's most important questions	• Transparency, clarity of communication and insight, support public confidence, promote trustworthiness and enable effective use of statistics.

	• Supporting confidence in statistics is the responsibility of officials and ministers across all organisations.
	• The Code of Practice for Statistics gives statisticians a unique responsibility and public accountability.
	• Innovation, collaboration and a system-wide view are essential to answer society's most important questions.

Statisticians feel empowered to provide leadership and feel positive about their career development and prospects

Statisticians feel empowered to provide leadership	• Different organisational structures have their own advantages and disadvantages. The seniority and skills of statisticians can impact on their effectiveness, but effective statistical leadership is also dependent on a culture which values analysis.
	• Statisticians need fit-for-purpose systems, and support to make time to develop good practice.
	• Statisticians should have greater freedom to engage openly both within and outside government.
Statisticians feel positive about their own career development and prospects	• There is a need for greater support and mentoring to facilitate career planning and progression.
	• There are concerns about the future statistical leadership talent pipeline. Once experienced analysts leave statistical roles or the civil service to take up other opportunities, routes back into senior statistical leadership roles are unclear.
	• GSS and other leaders need more comprehensive data to better understand the make-up of analysts working across government and monitor changes over time.

This report provides further details of the findings along with recommendations to support progress in realising these outcomes. The recommendations are summarised in the summary and next steps section on page 37. The report is intended to act as a starting point for further engagement. We will be engaging widely across analytical and other professions and plan to provide a progress update to this report in 2022. If you have feedback or would like to discuss any aspects of this report please contact us via regulation@statistics.gov.uk.

2. Introduction

Why does effective statistical leadership matter?

Strong statistical leadership is essential to supporting confidence in statistics and data published by government and ensuring statistics serve the public good.

The importance of accurate and informative statistics which command public confidence has been brought into sharp focus though the coronavirus pandemic. Statistics have been critical to managing the pandemic and will continue to be important in understanding its impacts. Whether it is measuring the numbers of COVID-19 infections and deaths or understanding changes in homelessness and benefit claimants, reliable statistics support better decision making by governments and individuals, and trust in the statistics impact on individuals' decisions.

Through strong statistical leadership governments can produce statistics that meet society's needs. Effective statistical leadership can also support confidence in the people and organisations that produce statistics, and the decisions which draw on them.

Having statistical leadership is not just about having good leadership of the statistics profession – as important as this is. Government needs individuals to show leadership in the production, use and communication of statistics, data and analysis at all levels and across all professions. This is what really matters to ensure public confidence in the statistics and data produced by government and decisions that these inform.

What we hope to achieve with this review

Supported by the expectations set out in the [Code for Practice for Statistics](#), we want to see an environment in which:

a) statistics, data and analysis are used effectively to inform government decisions and support society's information needs

b) statisticians feel empowered to provide leadership and feel positive about their career development and prospects.

Our approach

The review was initiated in July 2019 with much of our engagement happening prior to March 2020. COVID-19 has bought these issues into sharp focus and the report's findings have been updated to reflect what we have seen during the coronavirus pandemic.

We have engaged with a range of statistical and analytical leaders and senior decision makers within government, operating in different organisational cultures and structures to understand what supports effective statistical leadership. We have also spoken to individuals outside government to understand their perspective, including senior analytical leaders in academia, the Royal Statistical

Society, the Economic and Social Research Council (ESRC) and Administrative Data Research UK.

Alongside our engagement, to help further understand the current strengths and limitations of government statistical leadership, we have considered findings from a range of sources including:

- Civil Service People Survey
- Public confidence in official statistics survey
- Civil Service statistics
- findings from cross-government surveys of the Government Analysis Function
- evidence provided to Public Administration and Constitutional Affairs Committee (PACAC)
- National Audit Office review of specialist skills in the civil service
- other published materials such as the new UK Statistics Authority strategy, and materials on the career development pathways open to government analysts.

The sources outlined do not cover statisticians working in Northern Ireland. The Northern Ireland Statistics and Research Agency (NISRA) is responsible for statisticians within the Northern Ireland Civil Service (NICS). The Northern Ireland Civil Service are not included in most of the available data sources and often produce separate equivalent data. While NISRA is not formally part of the GSS, or the Government Analysis Function, it works very closely with the GSS and shares a common professional culture. Throughout the report we have highlighted where we believe differences or similarities exist between the available evidence and the experiences of statisticians that we spoke to working in GB and NI.

This report is produced as the basis for future engagement. The findings from our review are presented in section four of this report, alongside recommendations designed to help achieve positive outcomes for statistical and analytical leaders of the future (summarised in section five). We have also identified actions for the Office for Statistics Regulation (OSR) and the UK Statistics Authority.

Our unique perspective

As the independent regulator of official statistics produced in the UK, OSR is in a unique position to take a broader look at issues of importance to society and make the case for improved statistics. This is supported by our ability to convene, influence and highlight best practice from other sectors.

Our vision, statistics that serve the public good, is underpinned by the three pillars of the Code of Practice for Statistics:

- Trustworthiness - Confidence in the people and organisations that produce statistics

- Quality - Data and methods that produce assured statistics

- Value - Statistics that support society's needs for information.

Statistical leadership is a central feature of the Code. The Code principle 'Independent decision making and leadership', focuses on the vital and independent role played by a department's Statistics Head of Profession.

The UK Government's Ministerial Code also highlights the need for Ministers to be mindful of the Code of Practice for statistics, and the fact that observance of the Code is a statutory requirement on all organisations that produce National Statistics.

We also champion the need for statistics to support a wide range of uses, including, by government as well as by charities, community groups and individuals. Statistics should allow individuals and organisations to reach informed decisions, answer important questions, make the case for change, or hold government to account.

3. Statistics in government

Statistics in government are not just about professional statisticians or the network of people producing official statistics. Statistics are widely used and communicated – and sometimes produced – by those outside the statistics profession. However, understanding the statistics profession helps in understanding effective leadership.

Figure 1: The work and characteristics of UK government statisticians

There are approximately 1,750 people in the **Government Statistician Group**, and at least 1,900 statistical posts spread across over 30 government departments (based on Civil Service Statistics, but this is known to be an underestimate due to a lack of reporting by some departments and imprecision in matching people to posts).

A survey of 10-20 per cent (2000) Government Analysis Function members suggests:
- the **gender balance** is similar to the broader civil service. However, only 38% of Senior Civil Service respondents were female in 2020.
- the **ethnicity distribution** is broadly representative of UK society, but many more ethnic minority colleagues work in more junior than senior grades in 2020.
- the number of people declaring a **disability** significantly increased since 2017 – from 7% in 2017, to 22% in 2020.

Government statisticians are involved in the production of 830 **National Statistics** in the UK and there are at least a further 900 **official statistics**, produced by over 30 departments, or the 79 non crown-bodies either acting on their behalf, or specified in statutory orders, as defined in the Statistics and Registration Service Act 2007.

Those identifying as statisticians (GB only) generally reported higher mean scores for the 10 Civil Service People Survey (CSPS) headline measures in 2019, compared to the scores for all civil servants, with the exception 'organisational objectives and purpose', which is 1 per cent lower. Further CSPS statistics are presented in section 4 and Annex 1.

Source: Civil Service People Survey 2019; Civil Service statistics 2020; Analysis Function diversity and inclusion survey; OSR register of National Statistics.

The **Government Statistical Service** (GSS) is a cross government network, spread across public bodies, including Scotland, Wales and UK government departments. It encompasses people working on official statistics from a range of backgrounds and professions. The **Government Statistician Group** (GSG) is the professional community who are recognised members of the statistics profession. The GSG is part of the cross-Government Analysis Function.

The Northern Ireland Statistics and Research Agency (NISRA) is the equivalent body within the Northern Ireland Civil Service (NICS)[1]. While NISRA is not formally part of the GSS, or the Government Analysis Function, it works very closely with the GSS and shares a common professional culture.

Having statisticians based within government departments, not just in the National Statistical Institutes, is a notable feature of the UK statistical system. All organisations which produce official statistics have a Chief Statistician or Head of Profession for Statistics (HoP) whose purpose is to uphold and advocate the standards of the Code of Practice for Statistics[2].

Figure 2 shows the structure of the UK statistical system. The UK Statistics Authority is independent of Government and reports directly to UK Parliament and the Devolved Legislatures. Heads of Profession in departments are managed within departments with professional oversight from the National Statistician. The Chief Statisticians in Scotland, Wales and Northern Ireland also have a professional oversight links to the National Statistician. The GSS includes ONS, as well as those working across UK Government Departments, and in Scotland and Wales.

Figure 2: Structure of the UK statistical system

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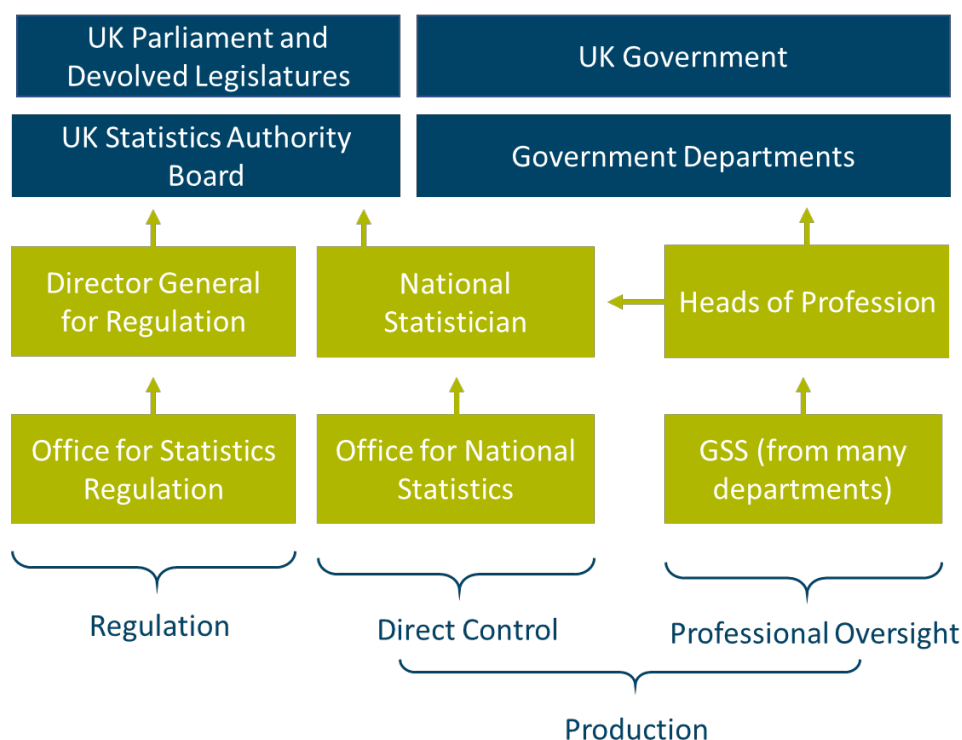
[1] NISRA Statisticians are spread across a range of public bodies and Northern Ireland government departments. NISRA includes all NI civil servants who are recognised members of the statistics profession, and some other NICS staff who work on official statistics within the Department of Finance. A few public bodies who produce official statistics in NI do not have NISRA staff.
[2] Some smaller departments and arm's length bodies have a 'lead official' with accountability to a Head of Profession from a sponsor department. In Northern Ireland, the Head of Profession for Statistics in each department is known as the Senior Statistician.

HoPs also have a key role in supporting the professional development of the departmental statisticians. HoPs are accountable to their departmental Ministers for the relevant parts of their statistical work programmes, and to the UK National Statistician on professional matters. The Code states they should strive to improve statistics and data for the public good, and challenge inappropriate use.

The UK Statistics Authority (UKSA) plays a key role in the governance of the UK statistical system. It is at arm's length from government and has a statutory objective to promote and safeguard the production and publication of official statistics that 'serve the public good'.

The Authority's five-year strategy 'Statistics for the public good' sets out the core principles which will underpin the work of the GSS until 2025. It emphasises that the GSS will need to be:

- **Radical** in taking opportunities to innovate and collaborate, using data for the public good

- **Ambitious** in setting out to answer the critical research questions the public needs answers to, and informing the decisions that citizens, businesses and civil society take

- **Inclusive** in its approach to workforce, talent management, and the design of data, statistics and analysis

- **Sustainable** in delivering a unique service in a way which delivers value for money through partnership and collaboration.

The NISRA corporate plan covers 2019 – 2024, and sets out its vision to:

- be the go-to organisation for an accurate and insightful account of life in Northern Ireland, informing decision making and recognising that our people are our strength;

- provide comprehensive registration and genealogy services that give our customers what they need; and

- be motivated and valued people doing excellent work together; innovating, growing, proud of our Agency and our impact.

A number of the themes and topics areas within the UK Statistics Authority strategy and NISRA corporate plan are relevant to strengthening statistical leadership in governments and are discussed in later sections of this report.

4. Outcomes

This chapter presents the outcomes we would like to see to support strong statistical leadership. Our review and associated engagement will focus on realising these outcomes.

Statistics, data and analysis used effectively to inform government decisions and support society's information needs.

I.   The value of statisticians and other analysts is understood by influencers and decision makers, and they see the benefits of having them at the table

II.   People have confidence in the statistical system and its ability to answer society's most important questions

Statisticians feel empowered to provide leadership and feel positive about their career development and prospects

III. Statisticians feel empowered to provide leadership

IV.   Statisticians feel positive about their own career development and prospects

4.1 The value of statisticians is understood

Effective policy making requires input from a range of experts. Statisticians can play an important role in this mix. As well as the valuable analytical skills statisticians can offer, they are uniquely placed to demonstrate independence from the political process which can support confidence in decisions.

More broadly, when analysts and non-analysts work together effectively it can improve outcomes and facilitate more effective internal and external scrutiny and public accountability. This can be achieved where **the value of statisticians and other analysts is understood by influencers and decision makers, and they see the benefits of having them at the table.**

There are two aspects to realising this outcome. Senior leaders within government must be champions for analysis and show it is being valued. Equally, statisticians must be able to demonstrate and communicate their own value.

There is growing acknowledgment of the importance of evidence and data and the value of those who understand them, whether specialist analysts or not. The Government Analysis Strategy states "partners outside of the Function (e.g. Policy and Finance) need analytical capability and need to be able to identify when to involve analytical professionals."

4.1.1 Senior leaders champion evidence

Senior leaders must champion the use of evidence and demonstrate the value they themselves place on it. Senior leaders, including policy professionals and senior analysts need to create an environment in which statistical thinking is not regarded as optional but is a vital component of reaching decisions, developing policy and setting up new administrative systems.

There are examples of statisticians being highly valued and involved in policy development throughout the process. There are also occasions where this is not the case. We heard positive examples of Northern Ireland Statistics and Research Agency (NISRA) statisticians being heavily involved in NI welfare policy development, with policy officials actively engaging with them for their input from the very start of the policy planning process.

Case Study: No.10 Data Masterclasses

No 10 has designed a series of talks to inspire and engage senior leaders across Government to make the effective use of data and evidence central to their everyday work. They are founded on the principle that increasing Senior Leaders data-literacy and grasp of empirical methods will help them to serve the country in the most effective way.

This Masterclass contains a number of compelling 15-minute talks from some of the top statistical experts in the UK, complemented by a range of case studies from within Government of data-exemplary practice. It also includes discussion points & quizzes to engage learners. It has been designed to be widely accessible for those with time pressures and varying prior knowledge.

The key aims are to engage and inspire senior leaders through memorable stories on the following topics:

- Module 1 - Data-driven policymaking/decision-making
- Module 2 - Communicating compelling narratives through data
- Module 3 - Data science and new frontiers

The Masterclasses are not designed to make participants data or evidence experts, but rather knowing how and when to make the best use of statistical evidence and the right questions to ask of analysts when doing so.

We would like to see **senior leaders** champion evidence through their actions, for example:

- Permanent Secretaries and Chief Executives encouraging a culture which values robust evidence and early input from statisticians and analysts

- Senior leaders actively questioning whether analytical input has been sought early on in developing policy and performance targets

- More widespread examples of departmental boards getting regular updates on the data relevant to their organisations, such as via presentations from senior statisticians at board meetings

- Promote initiatives that enhance statistical literacy for non-analysts to improve use and impact of statistical evidence

- Non analysts at all levels actively seeking to understand more about what analytical colleagues do. For example, through shadowing, speed-networking or other approaches to information exchange

- Building material and experiences which illustrate the value of analysis into development and induction programmes for non-analysts

- Support statistical leaders in adequately resourcing statistics within organisations and developing statisticians with the skills and experience to meet future needs.

OSR will:

- Highlight the value of analysts to decision makers and use our influence to advocate the value of statistical insights and strong statistical leadership

- Where necessary, challenge senior officials on the professional capability of statisticians in departments, to ensure statisticians have access to the appropriate training and opportunities for development, and that they are adequately resourced

- Where unclear, challenge senior leaders about the sources of evidence referenced or used to inform key decisions.

4.1.2 Statisticians can articulate their value and understand the context of their work.

We have set out our expectation that senior leaders work to encourage a culture where statisticians are valued, and the input of statisticians and other analysts is sought on key decisions – for example, in the development of policy or when performance targets are being determined. The role of senior leaders needs to be supported by statisticians who are able to demonstrate and communicate their unique value, by being clear on what they can bring to the table and why they should be included. To be able to do this it is essential that statisticians understand the context of their work and are able to engage effectively.

From our review we found that where statisticians understood their value, they were able to communicate how they could best support and work with their colleagues. These statisticians felt their skills were appreciated and utilised appropriately. We also had feedback that statisticians who kept abreast of political developments and organisational priorities were reported to better pre-empt when and what analysis would be required, which was appreciated by their colleagues.

We found that statisticians are most valued by colleagues when they:

- provide clear explanation about what the statistics show. For example, they can: clearly explain the key messages; convey any limitations or

uncertainty; and, be clear what the statistics mean for the decisions being considered

- understand what they can and cannot do with data and where necessary offer sensible alternatives which show an understanding of the context and issue.

The 2019 Civil Service People Survey shows that 79 per cent of statisticians who responded to the survey felt they had a good understanding of their organisation's objectives (Figure A.10). It shows many statisticians feel confident in understanding organisational objectives and is similar to the scores for other groups (80 per cent for all civil servants, social researchers and economists, and 81 per cent for operational researchers). While it could be argued that having a clear understanding of an organisation's objectives is more central to a communication role (response of 83 per cent) than that of a statistician, having a good awareness of the organisational context allows analysts to anticipate the needs of decision makers and the analytical insights that might be of value to them. The time series for this question (also in Figure A.10) shows that responses for statisticians have stayed similar while some other groups have lower responses in 2019 than previous years, bringing the percentages closer for the different groups.

While much of the effectiveness of statisticians in communicating their value is down to the actions of the statisticians, organisational structure and culture can support or hinder these efforts. For example, where statisticians are embedded in policy teams, they are more likely to have an awareness of the context of their work and a stronger relationship with colleagues from other professions. However, there is trade-off. Embedded analysts will often be more junior than colleagues in the team and possibly therefore feel less able to challenge, while central analytical or statistical teams often provide more opportunities for developing technical skills. The issue of structure is covered more specifically in Section 4.3.

To support statisticians' value to be understood **statistical leaders** should:
- Make the case for adequate resourcing (including appropriate skills of individuals)
- Support statisticians to understand the context of their work including organisational objectives
- Promote training on communication skills
- Encourage shadowing and secondments (e.g. to gain experience of policy teams/policy departments/operational delivery)

Statisticians at all levels should**:**
- Think about the context of any analysis and key messages, when communicating findings
- Keep abreast of the context of their work, including organisational objectives

- Make time to engage with policy teams, e.g. individual conversations with relevant officials and broader organisations, attending team meetings, spending time co-located with colleagues or shadowing

- Seek out appropriate training, e.g. training courses on working with policy colleagues such as those developed by Best Practice and Impact (BPI)

OSR will**:**

- Continue to promote the value of statisticians, statistical insights and strong statistical leadership – for example, through official letters, statements informal engagement, conference presentations, and our regulatory work

- Highlight and support shadowing opportunities and training to enhance statisticians' value to decision-makers and how they can communicate this

- Continue to link to guidance on communicating quality information when engaging with producers

- Promote relevant courses, such as the BPI Communicating, Quality and Uncertainty course, when appropriate in regular regulatory activities

- Engage with GSS People Committee and NISRA to support development of communication and policy knowledge in statisticians

4.2 People have confidence in the statistical system

To support public confidence, statistics and data produced by government should answer society's most important questions and organisations and individuals producing the data should demonstrate they are worthy of trust. When these outcomes are achieved, individuals and organisations are able to use data to understand the world around them, support their decision making and hold government to account.

Findings from Public confidence in official statistics - 2018, highlight that while public confidence in official statistics produced by ONS has been gradually increasing, confidence in official statistics being presented honestly by government or newspapers is still comparatively low amongst the general population (31 per cent of respondents in 2018 agreed that government presents official figures honestly, and only 23 per cent agreed that newspapers do). The top three reasons respondents gave for not trusting ONS statistics were:

- Misrepresentation by politicians or media (24%)

- Government has a vested interest in results (23%)

- Figures alone do not tell the whole story (23%)

During the pandemic experts, including analysts, have been given authority to provide transparent and independent insights to increase public confidence in official evidence. It has been positive to see an increased profile of statisticians in the media and more direct engagement with the media. Government departments may benefit from supporting statisticians and other analysts to more routinely engage directly with the media, for example through conversation with journalists

or through press briefings for key statistics. This would promote better understanding among journalists which in turn would lead to better reporting and enhance public confidence in the statistics and decisions which draw on these.

It is also important that senior officials and ministers are role models for use of evidence, including ensuring any data they draw on in parliament and the media are made available to everyone in a clear and accessible way. They should also seek to ensure appropriate use of data and be clear on relevant limitations when data are used.

4.2.1 Published data can answer society's most important questions

Statisticians are well placed to help improve public confidence in statistics by ensuring they present a full and coherent statistical picture, and that they develop statistics and analyses which reflect the lived experiences of wider society so that people can see themselves in the statistics. OSR's strategic business plan sets out our ambition for a statistical system that will:

- provide a richer picture of the UK's changing economy and society. The system will provide disaggregated and granular insight into how different communities, places and people are doing

- deliver clear, authoritative messages. It will be a core capability of statisticians to interpret, illuminate and caveat what the statistics say

To answer society's most important questions, statisticians need to engage with users of statistics to understand users needs and consider how the data produced fit with other sources of data. With increasing use of administrative data, it is even more important that analysts are involved in development of operational systems. This is to enable systems to be set up to effectively support statistical reporting which allows understanding of operational delivery and supports effective policy evaluation. Statisticians must innovate and collaborate across organisational boundaries.

The Code is clear that users should be at the centre of statistical production, with producers considering both known and potential user views in all aspects of statistical development, including in deciding whether to produce new statistics to meet identified information gaps. However, we also recognise that statisticians face competing demands between meeting departmental priorities and wider users' needs, particularly as understanding and meeting wider needs often requires additional engagement and resources. OSR's regulatory guidance on user engagement emphasises both organisational and individual responsibilities for engagement.

It is important that statisticians develop the skills to engage effectively with users of statistics and influence decision making. It is also important that organisations build a culture which supports statistics which have value beyond the organisation. As highlighted in our review of User engagement in the DEFRA group, understanding how statistics are used and what users and other stakeholders need is critical to ensuring that statistics remain relevant and provide insight. To

achieve this, statistics producers must engage with users. These themes will be expanded upon further in the forthcoming User engagement strategy for statistics, which will set out that user engagement is essential to:

- Prioritise work based on what statistics users want
- Understand what users do with data
- Understand acceptable levels of quality
- Present statistics when users want them, and in ways they understand
- Build trust in statistics
- Maximise the use of statistics
- Test experimental statistics
- Make users feel a part of the process.

Results from the Civil Service People Survey 2019 suggest there is a positive culture of innovation among statisticians. They are the analytical profession most likely to report that their team is encouraged to come up with new and better ways of doing things (Figure A19) and has consistently been the most likely profession to report they believe they would be supported to try a new idea, even if it may not work (Figure A18).

During our engagement, we heard that a stronger, better connected and more organised statistical service was needed to truly drive forward improvements in the public value offered by official statistics. Statisticians must work across organisational boundaries; collaborate with external topic or methods experts; or obtain/provide access to new data. To effectively deliver new outputs they need be able to influence other organisations, which can be particularly challenging where there are conflicting priorities. By working across these boundaries, it may possible to answer questions which had previously been too difficult or costly to answer.

As analytical projects become increasingly driven by changes in the analytical landscape, like the emergence of large-scale linked datasets, areas of shared topic interest and overlap between the analytical work of government and other sectors become increasingly more common. The ESRC recognise this changing context as part of its Fit for the Future: Leadership in the social sciences programme of work, which identifies the changing capabilities required to operate effectively in this environment.

Case study: ONS COVID-19 Infection Survey

ONS very quickly set up a new survey which has been an important source of information during the pandemic. The survey aims to identify the percentage of the population testing positive for COVID-19 and whether they have symptoms or not.

As it helps track the current extent of infection and transmission of COVID-19 among the population as a whole, the survey estimates contribute to the Scientific Advisory Group for Emergencies (SAGE) estimates of the rate of transmission of the infection, or "R number" and helps to inform decisions related to management of the pandemic.

Statisticians identified the key questions which need to be answered and worked across multiple organisations, including the University of Oxford, University of Manchester, Public Health England and Wellcome Trust, to deliver a trusted output to an extremely short timescale.

While initially only established in England, it now has additional partners and provides weekly estimates for all four UK nations.

We have seen many examples of innovation and statisticians working effectively at pace and across boundaries to provide answers to the most important questions during the coronavirus pandemic. We hope to see the learning from these experiences support future developments and a continued ambition to collaborate with others to produce innovative new statistics that help to answer society's key questions.

Senior leaders should promote a culture which:

- Enables statisticians to resource teams to undertake user engagement activities
- Develops influencing and engagement skills
- Supports production of outputs which cross organisational boundaries, and fill key evidence gaps
- Encourages data linkage and innovation to answer society's key questions

Statisticians at all levels should:

- Learn from the recent good practice seen across government, in identifying important questions and how to answer them
- View the statistical system as a whole, challenging themselves to consider priorities in the context of society's most important issues, rather than organisational responsibilities
- Learn lessons from cross-UK work on user engagement

- Work with external organisations and academics, actively creating a collaborative approach to projects.

OSR will use our regulatory work to:

- Highlight the importance of user engagement
- Champion the development of cross-departmental and cross-sectoral analytical priorities to ensure opportunities to answer society's most important questions are utilised
- Encourage appropriate use of data linkage and innovation.

4.2.2 Statistics and data produced by government are trustworthy

To demonstrate trustworthiness and support confidence, organisations that produce statistics and data must be well led, well managed and open, and the people who produce statistics must be impartial and skilled in what they do.

An important aspect of this is that statisticians feel empowered to lead and to develop their careers (see sections 4.3 and 4.4). However, there is also an important role for ministers, senior leaders, communication professionals and all analysts in building a culture which supports these values. Through our review and ongoing regulatory work, we have identified three areas of focus for organisations to take action to support confidence in statistics and data produced by government.

I. **Transparency:** whenever figures are quoted publicly by ministers or officials, the figures should be released at the same time and in a way that allows members of the public to understand the basis for the figures and any associated limitations and caveats.

II. **Media engagement:** we have seen the value of increased media engagement by statisticians (such as ONS and NISRA). Where statisticians have engaged directly with the media it often leads to improved reporting, which in turn supports confidence in the data and understanding of the data. It would be beneficial to see statisticians across all organisations having the opportunity to engage directly with the media in order to explain the statistics they have produced.

III. **Clear narrative:** confidence can be undermined where statistics are used selectively, leading to a narrative which creates confusion or is not supported by the published data. Ministers and officials should always seek to engage with analysts to ensure statements are well supported by the available evidence and can be clearly explained.

Where statisticians and analysts are given authority to provide transparent and independent analytical insights, this can increase public confidence in official evidence. And perhaps paradoxically, by giving statisticians and analysts the necessary space and autonomy to provide independent authoritative insights,

organisations have the potential to enhance their own trustworthiness, and promote public confidence in their decisions through the transparency demonstrated by providing analysts with this autonomy.

While direct contact with the media is an approach that should be more widely supported by government organisations, statisticians have also found other ways to support wider communication, for example through blogs, speaking at conferences, and making use of social media.

Case Study: Northern Ireland Statistics and Research Agency (NISRA) COVID-19 press briefings

NISRA statisticians introduced press briefings to explain their statistics on weekly deaths due to COVID-19. The team found the sessions to be very helpful in building understanding of the data and therefore improving press reporting.

Case Study: Welsh Government Chief Statistician's blog

The Chief Statistician's blog is a regular platform for the Chief Statistician of Wales to speak out on statistical matters. The Chief Statistician uses the channel to champion the work of Welsh statisticians, provide clarity on planned developments, and provide guidance on the correct interpretation of a range of Welsh government statistics. This open communication approach keeps users and the wider public informed on the latest statistical developments.

To further build public confidence in the statistics and data used by government, we would like to see more public bodies embracing the voluntary application of the Code for analytical outputs beyond official statistics, especially when these outputs are informing decisions of high public interest.

> ## Case study: Voluntary application of the Code by Scottish Fiscal Commission
>
> The Scottish Fiscal Commission (SFC) is Scotland's independent fiscal institution and was created in 2017 to serve the needs of increased fiscal devolution in Scotland. The SFC is not considered an official statistics producer, but has made an active choice to apply the Code of Practice for Statistics, wherever possible.
>
> The SFC recognises that building this trust in its analyses is essential to meet its users' need for independent scrutiny of the Government's budget and to inform debate.
>
> In March 2018, the SFC published a Statement setting out its ongoing commitment to voluntarily apply the Code and published a blog setting out its approach to achieving this.
>
> The SFC's ongoing commitment to apply the Code has helped it to develop a reputation in Scotland, the UK and internationally, for providing independent and credible forecasts that enhance public confidence.

To support confidence in statistics, it is also important that senior officials and ministers act as a role model in the appropriate use of statistics and data. By showing this leadership in the use of statistics across government, senior leaders can support trust in governments and the decisions they make. This is particularly important in circumstances when government is looking for buy-in to polices which affect everyone's lives, such as during the coronavirus pandemic.

Senior leaders should commit to:

- Demonstrating best practice in their own use of statistics and evidence, both internally and when quoting data publicly, including making data and explanations publicly available for all figures used publicly by the department and its ministers

- Allowing statisticians to engage directly with the media to explain statistical outputs

- Engaging analysts early in briefings and throughout the policy-making process.

Heads of Analysis and senior leaders should:

- Continue to develop cross-organisational links – inside and outside government – to support analytical priorities

- Make a more widespread commitment to voluntary adoption of the Code for analytical outputs which are not official statistics.

Statisticians at all levels should**:**

- Seek opportunities to engage more directly with a range of users, including directly with the media, to promote the statistics they produce and enable their appropriate interpretation.

OSR will:

- Continue to highlight examples of unpublished or misleading data and recognise examples of good practice

- Continue to advocate and promote the voluntary application of the Code pillars for sources of analysis and data that are not official statistics.

4.3 Statisticians feel empowered to provide leadership

There are strong links between statisticians feeling empowered to provide leadership and the ability of organisations to demonstrate good practice through collaboration and innovation. Statisticians are uniquely supported by the Code of Practice for Statistics, a central feature of which is statistical leadership. Including a principle focused on 'Independent decision making and leadership'. All organisations should assign a Chief Statistician/Head of Profession for Statistics who upholds and advocates the standards of the Code, strives to improve statistics and data for the public good, and challenges their inappropriate use.

For statisticians to feel empowered they also need structures that support them and a culture which values them. Statisticians also need fit-for-purpose systems to showcase their value. These are essential pre-requisites for statistics, data and analysis to be used effectively to inform government decisions and support society's information needs.

This section of the report focuses on the organisational attributes which enable leaders to feel empowered. Section 4.4. focuses on career development and prospects.

4.3.1 Organisational structure and infrastructure that enable effective delivery

Organisational structures vary by department. In some instances, teams are formed solely of statisticians, sometimes they are cross analytical and sometimes statisticians sit within policy or communications teams. Each of the scenarios comes with its own advantages and disadvantages. For example, when statisticians are based in policy teams, they tend to have a better understanding of the policy context, are more valued by decision makers and are more likely to input into key decisions. They may have the opportunity to develop broader skills and a degree of professional accountability due to being the recognised statistician on the team. However, there is potential for these statisticians to have less support on upholding the Code or drawing on technical expertise. In these cases it is important to be able to draw on a strong statistical community to maintain professional development.

Working in central analytical teams can offer a stronger analytical brand, more opportunities to work alongside other analytical professions or on a wider range of topic areas. In these contexts it is important to recognise the need to keep abreast of the broader context of the work and ways to ensure early engagement in policy thinking or operational decisions.

Heads of Profession play an important role in guiding statisticians within a department. The GSS provides guidance to departments on the appointment of Heads of Profession, which sets an expectation that Heads of Profession meet the highest level of the GSS criteria for statistical ability as a minimum and in addition would usually be expected to fulfil the generic civil service competencies to a SCS level. Heads of Profession for statistics are usually the most senior statistician in an organisation. There is variation in the seniority of Heads of Profession, and this can impact on their own influence and impact, as well as that of the profession as a whole within the organisation.

The table below shows the grades of the most senior analysts working in analytical roles for four analytical professions for the 16 major Whitehall departments and the devolved administrations. In many cases these will be the Heads of Profession, but sometimes they may be in a more general analytical role with a named Head of Profession at a lower grade.

Figure 1: Senior Analysts in Governments
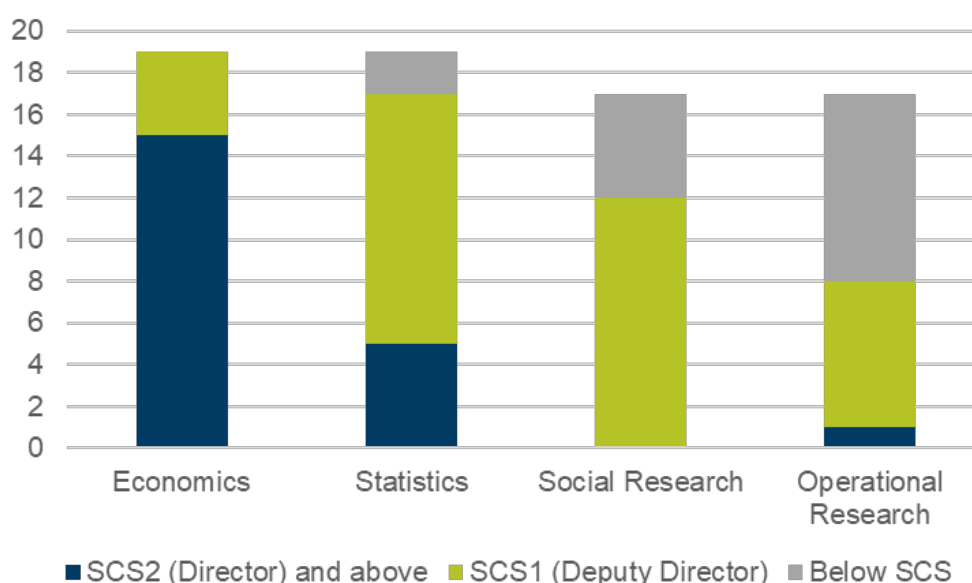
Table 1: Senior Analysts in Governments

	Economists	Statisticians	Social Research	Operational Research
SCS2 (Director) or above	15	5	0	1
SCS1 (Deputy Director)	4	12	12	7
Below SCS	0	2	5	9

Table Notes

1. The table has been collated informally to illustrate the differences. It is correct at December 2020. This information is not collected as part of a standard data collection.
2. For each profession the table includes the most senior individual in an analytical role. In most cases these are the Head of Profession. In some cases the most senior analyst for a profession maybe in a general analytical role with the designated Head of Profession at a lower grade. The table does not include individuals who have a background as an analyst but are no longer in fully analytical roles.
3. The table includes the Chief Statistician for Northern Ireland who is chief executive for NISRA (and Department of Finance Senior Statistician), but does not include Senior Statisticians in other NI departments. There are many organisations within Great Britain (for example ALBs) which will have identified Heads of Profession or Lead Officials who are not included in the table.
4. The responsibilities of the Head of Profession may be split or named in different ways (e.g. Chief Statistician or Director of Analysis) within and across professions.
5. The table does not include ONS which has some of the most senior analysts.
6. Two organisations have no operational researchers. NISRA do not separately identify social researchers and statisticians and one organisation has no social researchers.

While the structure is important, individual personalities and organisational culture can mitigate many of the issues that can arise through any given structure. This report does not seek to suggest the best structure, but does provide some examples of things which support effective leadership:

1. Heads of Profession (HoPs) told us that where they had time dedicated to professional activities, they were able to be more effective, for example it enabled them to participate in GSS wide activities and build up greater knowledge and a wider network.

2. Statisticians with a wider portfolio were more likely to have influence within the department. This could be because they were more often at the table in key decisions.

3. HoPs felt that having a strong identity for statisticians across the organisation gave them more influence within the department as colleagues were more likely to understand what they could offer. Statisticians saw the HoPs as central players in building a sense of shared identity within departments and when done effectively, this encouraged interactions between statisticians and knowledge sharing between teams.

4. Statisticians based in cross-analytical or embedded policy teams tend to have a better understanding of the policy context, and are therefore more valued by decision makers. These roles offer opportunities to demonstrate leadership as statisticians can get more exposure to policy development. However, there is the potential for these statisticians to have less support in upholding the Code and less likely to develop technical expertise. Conversely, other statisticians may work at the forefront of statistical innovation and technical developments, though have

very limited experience of working in a policy facing role and the various opportunities and challenges that brings. This is accentuated for statisticians working in independent producer bodies such as ONS.

5. Statisticians' ability to influence within an organisation was not solely down to the grade of the most senior statistician. While this did have an impact, an individual's experience and communication skills also played a part. While being appropriately senior does helps to ensure that statisticians get invited to the right meetings, departmental culture, structure and having good networks were seen to be equally, if not more important for getting a seat at the table. In some departments, relatively junior statisticians could get exposure to ministers, if they had the right knowledge and communication skills and were given opportunities to do so by their senior leaders.

6. To be effective and valued, the ability to be pragmatic in addressing (and anticipating) the needs of decision makers, while retaining professional integrity, was key.

7. For statisticians to fully showcase their value they need fit-for-purpose systems (e.g. to enable automation, or effective presentation). Our review highlighted a growing consensus among some junior statisticians that existing analytical software available to them was outdated compared with the software that they used in previous roles or higher education. This is leading to some statisticians down skilling in order to effectively carry out their roles. According to the Civil Service People Survey 2019, around two-thirds of analysts across all professions believe they have the tools they need to do their jobs effectively (Figure A20). The benefits of newer analytical software for productivity and quality in departments where it has already been introduced should be explored, with a view to supporting a case to upgrade legacy systems in other departments. In Autumn 2020 OSR launched a review to explore the use of RAP (reproducible analytical pipeline) in official statistics, looking at current use of RAP principles across the GSS, what enables successful implementation of them and what prevents people either implementing RAP fully or applying elements of it.

8. There is variation across organisations in what statisticians can and cannot do to communicate externally, we saw many different ways in which organisations have communicated externally, and demonstrated statistical leadership (for example, the lead statistician for the Office of Rail and Road's estimates of station usage statistics hosted a live Twitter Q&A session on the day the statistics were published, followed by a live user led YouTube Q&A session the same evening).

To support effective delivery **senior leaders** should:

- Raise the profile of the work statisticians and other analysts are doing across the department, making the case for additional resource and new technologies where necessary and highlighting the unique role of statisticians, who have a duty to uphold the Code of Practice for Statistics

- Give statisticians and analysts the opportunities to demonstrate leadership, particularly through the freedom to undertake external communications

- Support the development of fit for purpose systems for statisticians to more fully demonstrate their value in promoting and ensuring trustworthiness, quality and public value

Statistical leaders should:

- Undertake activities to build a strong identity for statisticians across the organisation, to help share knowledge and give them more influence
- Make the case for the systems and technology required for statisticians to demonstrate their value
- Make time to build networks within and outside organisations and learn from others

Statisticians at all levels should:

- Seek opportunities to demonstrate leadership across a wide portfolio of work and across technical and policy facing roles
- Develop the skills and experience needed to be innovative and be pragmatic in addressing (and anticipating) the needs of decision makers, while retaining professional integrity

4.3.2 Organisational culture empowers leaders

The organisational culture is important in determining whether statistical leaders feel empowered and therefore what impact they can have. This could be the extent to which the head of profession/chief statistician (HoP) feels empowered by their senior leaders or the extent to which the HoP supports other statisticians in the organisation to demonstrate statistical leadership. An organisational culture which supports and empowers statisticians can overcome many structural and infrastructure-related barriers.

The culture of an organisation is supported by the most senior leaders. Where evidence is valued by ministers and permanent secretaries, statisticians are more likely to have opportunities to influence and show leadership. Strong leadership from senior statisticians is also important to demonstrate the potential for statisticians at all levels to show leadership.

There are also lessons from other sectors. For example, senior statisticians in academia felt they were afforded greater responsibility for decision making than those in government, though many faced similar management challenges.

The skills of the individual and how they work within the organisational culture also makes a difference to how empowered leaders feel. For example, having strong communications and influencing skills were more likely to put someone in a position to show strong leadership and therefore feel empowered.

The ability to navigate the tension between departmental objectives and the Code of Practice can be most acute for heads of profession. HoPs who are able to advocate the principles of the Code without explicitly referring to the requirements were most likely to be effective in a departmental setting. HoPs are more likely to be given the freedom to demonstrate statistical leadership where they are able to be pragmatic in addressing (and anticipating) the needs of decision makers, while also retaining professional integrity.

Some HoPs told us that they would value guidance to help show how certain aspects of the Code are relevant in the policy department context, as that would help communicate the value that statisticians add, rather than the practices of the Code that need to be complied with. Some HoPs felt this could be complemented by more Code training for those outside the statistics profession and better GSS guidance for those working outside ONS.

HoPs also highlighted ways that the UK Statistics Authority, and OSR, might empower statistical leaders. One area highlighted was that there was a lack of clarity over how the GSS and the Analytical Function fitted together. Some senior leaders felt this lack of coherence and ambiguity made it hard to communicate their value to senior leaders in their organisations.

Some HoPs said that it was helpful when OSR wrote directly to permanent secretaries as it provided an opportunity to build links and raise the profile of statistical work. HoPs also expressed interest in being involved in peer reviews of outputs for large OSR projects ahead of their publication. This could increase the HoPs ownership and engagement with decisions that had an impact on the direction of statistical system as a whole.

Senior leaders should:

- Continue to cultivate a culture where statisticians are empowered to demonstrate leadership irrespective of grade

Analysis function should:

- Communicate more visibly how the GSS and Analysis function fit together to make it easier for statisticians to communicate their value

BPI should:

- Consider further Code training and guidance to highlight aspects of the Code most relevant in a policy setting

OSR will:

- Look at ways to support statistical leaders including through communications with senior officials to highlight the role of statisticians

- Consider opportunities to involve HoPs in peer review of OSR projects likely to impact on the direction of statistical system as a whole

- Explore the benefits of newer analytical software for productivity and quality in departments where it has already been introduced, with a view to supporting a case to upgrade legacy systems in other departments

- Consider the role of statistical leadership in its regulatory work, particularly reviews on use of reproducible analytical pipelines (RAP) and exam grade adjustment

4.4 Statisticians feel positive about their career development and prospects

Career prospects and development are important factors in retaining a skilled and motivated workforce. It is crucial to support a sustainable and diverse pipeline of future leaders. We would like to see statisticians and other analysts in government motivated by the opportunities for learning and development available and gaining the skills to be effective government statisticians in a changing environment. The Code's 'Professional capability' principle sets out the importance of developing statisticians' skills in line with professional competencies, with due consideration given to future organisational needs.

According to the Civil Service People Survey (2019), statisticians were the least likely of the analytical professions to think there were opportunities for them to develop their careers within their organisations (Figure A7). Civil Service statistics for 2019, showed statisticians' salaries are comparable with those for social researchers (Figure A3). While statisticians generally earn more than operational researchers at different points in the earnings distribution, they earn less than economists whose median earnings are similar to statisticians' upper quartile earnings. The location is relevant as the majority of economists' posts are in London (Figure A2).

Differences in salary are likely to be related to differences in seniority between the professions. As illustrated in Table 1, across the main Whitehall departments and the devolved administrations, economists tend to occupy the majority of posts at Director (SCS2) or above, with the most senior statistician and social researcher in each organisation tending to be at Deputy Director (SCS1) level. In over half of the departments the most senior operational researchers were below SCS1 level.

4.4.1 Career Pathways

The standard career path for a statistician in the GSS[3,4] is set out in Figure 3.

Figure 3: GSS career progression routes
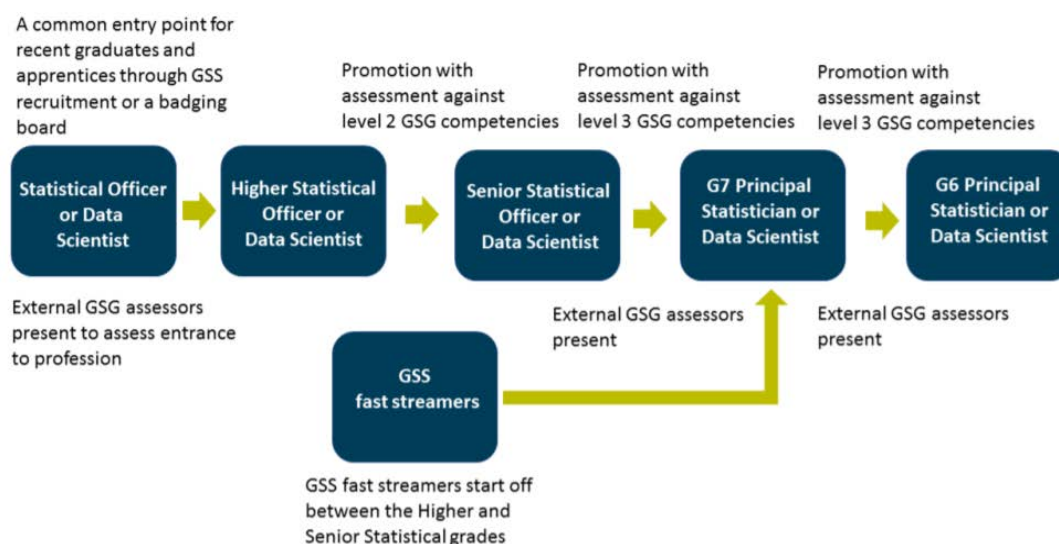
Source: GSS website

Within this career path statisticians have the opportunity to explore both technically oriented roles, from conventional data analysis and big data analytics, and roles that will develop broader skills, such as supporting policy implementation and decision making. This results in no 'one size fits all' career development model. This supports and encourages statisticians to diversify their skills, but can make it difficult to develop specific guidance to support statisticians in enhancing their own career prospects.

For statisticians looking to make the transition to senior analytical roles, there is a concern that these roles are in short supply, or that anyone with a technically focused career will not have any more senior roles to which they can move. In the Civil Service People Survey 2019, 63 per cent of statisticians felt that they have the right opportunities to develop their career, compared with 69 per cent of economists (Figure A7), and become less positive about their prospects the more years they spend in the organisation (Figure A8). This is not a new phenomenon and not unique to statisticians, but it came up frequently in conversations with early career statisticians as something that they are concerned about.

4.4.2 Development programmes

There are a number of development programmes available to statisticians but the eligibility and access to them can be varied. There are departmental or cross-government programmes which may be open to statisticians looking to develop their careers, such as ONS' High Potential Programme.

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[3] GSS does not include Northern Ireland. There is no statistics Fast Stream in NI.
[4] Statisticians can also join the profession through apprenticeships.

Case Study: ONS High Potential Programme

ONS runs a High Potential Programme for substantive G7s & G6s and one for substantive SEOs or equivalent. The programmes are aimed at those who have the potential, ability, engagement and aspiration for more senior leadership roles. The key aims of the programmes are to:

- drive forward development, focusing on the critical skills and behaviours needed for success at more senior leadership levels;

- provide structured development around a range of leadership experiences;

- maximise opportunities to build relationships and networks;

- strengthen and deepen the existing level of talent by attracting a rich, diverse mix of talented colleagues and supporting them in achieving their aspirations and fulfilling their potential.

The programmes are delivered by a facilitator and include:

- mentoring from a senior internal leader;

- self-assessment diagnostics to deepen personal awareness, review progress and inform development planning.

Previous participants have reported very favourably about the experience and additional skills that the programmes have afforded them.

The Civil Service Fast Stream[5] offers an accelerated career path to leadership with supported development. It is a centrally run scheme, managed by the Cabinet Office. The Fast Stream is designed to accelerate the career progression of the next generation of senior civil servants.

According to the Civil Service People Survey, Fast Stream analysts across professions are more positive about opportunities to develop their careers than non-Fast Streamers, though this is only marginal for statisticians (Figure A9). However, statisticians made up one of the smallest proportions of Fast Stream analysts recommended for appointment between 2016-2018, with only 138 statisticians appointed, compared to 538 economists, and 173 social researchers (Figure A4).

If statisticians are consistently underrepresented among the analysts entering the government Fast Stream cohort, they are also more likely to be underrepresented in the senior analytical roles of the future. However, this is a chicken and egg situation. As Fast Stream cohort sizes are in part based on bids from departments, which are themselves based on the pipeline of available statistical posts. To increase the Fast Stream cohort size there needs to be a sufficient number of senior statistical roles available for Fast Stream statisticians to eventually move

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[5] The equivalent scheme in Northern Ireland (the Northern Ireland Civil Service Fast Stream) only covers General Service staff. There is no Fast Stream for statisticians. The NICS Fast Stream last recruited in 2015.

into as well as sufficient numbers of applicants to the statistical Fast Stream that will meet the recruitment criteria.

Where there are not specific development programmes in place, we heard cases of departments providing and encouraging statisticians to rotate roles in order to expand their skill set and enable those who have identified any skill shortages to apply to roles which will help to improve this. We also heard about good examples of mentoring programmes. This is something that should be encouraged among all statisticians, providing them with support in identifying good opportunities to develop themselves and their skills. However, in general, statisticians need clearer and more active career guidance about the range of development pathways available to them.

There are helpful career and development resources available through the Government Statistician Group professional careers framework and the new Analysis Function careers framework. These documents provide guidance to government analysts about the potential development routes and training courses available to them, with case studies to illustrate the development paths taken by other government analysts. While these and other positive actions across government do serve to support statisticians as they develop their careers, there is a need for greater support and mentoring to ensure that effective career planning and progression is established across the GSS as a whole, not just those on the centrally run development programmes.

In particular, we heard that there is limited active talent management and succession planning when it comes to recruiting statisticians to take on Senior Civil Servant roles (Director and Director General level). There has been some effort to improve this with career conversations being offered by a Deputy National Statistician to all statisticians at Director level and to all HoPs at Deputy Director level. However, it is important to provide more career development and support for leadership at all levels to enable talented individuals to realise their career potential and ensure that this talent is not lost.

4.4.3 Monitoring the workforce

To understand the current status and future potential of statisticians in government it is important to have information on the current workforce. The National Audit Office notes in its review of specialist skills in the Civil Service that "…the longstanding problem of getting good specialist workforce data persists…Ideally, all functions would have access to workforce statistics from a consistent civil service-wide data set…Functions should ensure additional workforce data they collect aligns with the wider Civil Service Statistics data set. Where appropriate, functions should also engage directly with departments so both functions and departments can understand their specialist workforces, including their diversity and geographical profiles…."

Case Study: Making the GSS an inclusive place to work

The National Statistician wrote to all Departmental Directors of Analysis asking them to take meaningful actions across the function to tackle racism and discrimination and create greater diversity and inclusion across senior roles and at all levels.

He raised the duty of analysts to understand all inequalities to help government and other decision-makers to support a more equal and fair society and ensure a comprehensive programme of research, statistics and analysis to fully understand ethnicity in the UK. He also announced an Inclusive Data Taskforce to identify current data gaps are and explore the ways in which access, analysis and reporting of inclusive data can be improved.

The National Statistician is working with Heads of Profession across the GSS to deliver against the following commitments:

- Tackle discrimination in all its forms and support the health and wellbeing of all ethnic minority colleagues
- Create a more diverse profession with improved experience and representation at all levels for ethnic minority colleagues
- Ensure government data and analysis truly reflect the UK people.

This includes delivering a recruitment action plan to support and encourage more people from ethnic minority backgrounds into analytical careers at all levels in the Civil Service, and building a culture to enable career progression into the most senior positions and increase ethnic minority representation across the GSS governance structure and its decision-making.

In recent years the Government Analysis Function has started to collect diversity information from its annual members survey, which includes GSG members. However, relatively little of this has been published to date and it is not clear how useful this source is for monitoring career progression over time or how consistent the data are with the official Civil Service Statistics. Even in the Civil Service Statistics, it is apparent that a number of departments have not reported disaggregated civil service statistics for different professional groups.

In terms of a snapshot of some of the evidence available, according to Civil Service Statistics 2019, women are overrepresented at the lower responsibility level grades and underrepresented at the more senior grades (Figure A.25). And in the 2020 Government Analysis Function diversity and inclusion survey based on a 10-20 per cent sample/2000 government analysts, there were generally proportionately less female respondents in each Grade as Grade increased – increased – for example 38 per cent of analytical Senior Civil Servants (SCS) responding to the survey were female. This trend was fairly consistent across grades. Also, slightly more discrimination was reported by female respondents (11 per cent vs. 8 per cent males), and female respondents also had slightly less positive perceptions of fair treatment in the workplace than male respondents.

The survey also showed that more junior grades were more likely to be filled by a respondent from an ethnic minority background (e.g. 30 per cent of Executive Officers, 22 per cent of Grade 6s, and the figure for SCS was too low to report for reasons of disclosure). Ethnic minority analysts (as with individuals with disabilities) were also more likely to report experiencing discrimination – e.g. 34 per cent of Black respondents, 15 per cent of disabled respondents vs. 9 per cent of White British respondents. Other findings from the survey include that Private education was more common among higher grades – e.g. 20 per cent of SCS, 19 per cent of Grade 6s; that there is a relatively London-centric (e.g. 55 per cent are based in London, particularly those above SEO grades); and a mostly full-time analytical workforce - 82 per cent full-time, 11 per cent part-time, 1 per cent job share, 5 per cent compressed hours.

While the Government Analysis Function survey provides some helpful insight, it is not clear how the National Statistician's commitment to make the GSS an inclusive place to work will be successfully monitored by the GSS People Committee, without more comprehensive, robust and accessible evidence on the analytical workforce. We understand that the results of diversity and inclusion survey combined with a cross-function consultation have informed the development of the function's first diversity and inclusion strategy, which is due to be launched in February 2021. The strategy has been comprised of analysts across a diverse range of backgrounds and departments, and has three main pillars: Attract, Build and Create (ABC). The strategy is integral for realising the Analysis Function's vision of ensuring that it is a truly inclusive place to work with a workforce that is representative of the society it serves.

To further inform monitoring of progress in this area, more comprehensive information about the make-up of the statistical profession (GSG) and those who work on statistics (GSS) should be collected – for internal purposes and published for transparency. This will allow a better assessment of the career pathways taken by government statisticians and their characteristics, including those needed to monitor career pathways and talent management in line with diversity and other inclusion characteristics.

There is also an important role for all statisticians to show leadership in supporting inclusivity and diversity through the actions they take in their own organisations and the use of data and analytics which can support better understanding in a range of contexts.

4.4.4 Areas of development focus

There is a clear ambition to improve the development offer available to members of the Analysis Function with a strong focus on developing analysts with strong communication skills. The Analysis Function Strategy says "…, each profession has similar capability requirements to develop future leaders who communicate complex concepts and results in way that has the greatest impact."

This is also picked up in the UK Statistics Authority strategy "…the increased risk of distorted reporting of information increases the need for a confident statistical system.…analysts working in the system need to develop their role as communicators. Professional commentary and advice on contemporary issues is

what the system is for. Statisticians and analysts should be confident in their ability to provide that impartial view of the world."

This was reiterated when we asked statisticians and customers of their work about the characteristics of HoPs that they thought demonstrated effective statistical leadership. A number of qualities emerged, including having sound general leadership skills underpinned by technical expertise, but with strong communication skills, which were seen as absolutely essential. These characteristics were also valued in more junior analysts.

This need to develop communication skills can be achieved on the job. For example, statisticians may leave their analytical roles in order to develop their careers elsewhere. If managed well, this can have the advantage of statisticians broadening their understanding within professions and potentially developing more leadership skills. However, there are often no straightforward routes back into government analytical leadership roles once people have left for some time, so these people are then lost to the Analysis Function. For example, GSG members are expected to prove their continued professional development while away and will lose their professional badging after 5 years away from a professional role (one year in NISRA).

Spending time out of a production role can be challenging for those working in some locations. This lack of broader experience may be a disadvantage when applying for senior analytical posts in the future. Appropriate structures need to be established to better allow for statisticians to move between specialist and non-specialist roles such as short-term secondments, but retain potential routes back, for example, into future professional (including senior) analytical roles, following a longer-term move to gain broader experience and skills.

Senior statisticians should:

- Highlight examples of statisticians and other analysts moving on to senior non-statistical roles

- Seek to more effectively manage career pathways. Including offering mentoring, shadowing, secondments and career conversations

- Encourage informal, on-the-job, and formal training, including focusing on strengthening communication skills, particularly when communicating with non-expert users and non-analysts.

The GSS People Committee should:

- Regularly collect, monitor and publish consistent information on the characteristics of the GSS and GSG workforce

- Explore options for increasing the size of Fast Stream statistician cohorts

- Support statisticians to develop career pathways which focus on technical specialist or broader skills.

Statisticians at all levels should:

- Support diversity and inclusion across their organisations

- Proactively seek opportunities to develop technical and broader communication skills throughout careers, through a mixture of training, secondments and different analytical roles

- Contribute relevant career and diversity information through relevant official channels to enable a better understanding of the overall profile of the GSS workforce

OSR will:

- Work with those who deliver talent management and mentoring programmes, including the GSS People Committee, to champion the need for clear and effective career support and management for statisticians at all levels. These programmes could be delivered through development schemes, secondments, coaching and mentoring, career conversations, shadowing and other opportunities in a range of settings

- Work with groups like the GSS People Committee to make sure that the training that is on offer to statisticians is clear and meets their needs

- Support statisticians in the communication of statistics and data by championing the principles of the Code of Practice throughout its regulatory activity

Summary and next steps

This review has made a range of recommendations designed to ensure that government can demonstrate statistical leadership. The table below provides a summary of the recommendations, including where OSR will work with others to overcome barriers to effective statistical leadership and support analytical leaders of the future.

We will engage with relevant groups to push for progress on these recommendations and plan to produce an update report in 2022 setting out progress against the outcomes and recommendations. If you have feedback or would like to discuss any aspects of this report please contact us via regulation@statistics.gov.uk.

	Senior Leaders	Senior Statisticians/ Directors of Analysis	All Statisticians	OSR
1. Value of statisticians understood	• Encourage a culture which values robust evidence and early input from analysts. • Actively question whether analytical input has been sought in developing policy and performance targets. • Departmental boards get regular updates on the data relevant to their organisations. • Promote initiatives that enhance statistical literacy for non-analysts.	• Make the case for adequate resourcing. • Support statisticians to understand the context of their work, including organisational objectives. • Promote training on communication skills. • Encourage shadowing and secondments (e.g. to gain experience of policy teams/policy departments/operational delivery).	• Think about the context of any analysis and key messages, when communicating findings. • Keep abreast of the context of their work, including the organisational objectives. • Making time to engage with policy teams e.g. individual conversations with relevant officials and broader organisations, attending team meetings, spending time co-located with colleagues or shadowing. • Seek out appropriate training e.g. training courses	• Highlight value of analysts to decision makers and advocate strong statistical leadership. • Where necessary, challenge senior officials on the professional capability of statisticians. • Where unclear, challenge senior leaders about the sources of evidence referenced or used to inform key decisions. • Promote the value of statisticians, statistical insights and strong statistical leadership.

	• Non-analysts at all levels actively seeking to understand more about what analytical colleagues do. • The value of analysis highlighted in development and induction programmes for non-analysts. • Adequately resource statistics within organisations and develop statisticians with the skills and experience to meet future needs.		on working with policy colleagues such as those developed by Best Practice and Impact (BPI).	• Highlight and support shadowing opportunities and training. • Highlight guidance on communicating quality information when engaging with producers. • Promote courses, such as the BPI Communicating, Quality and Uncertainty course, when appropriate in regular regulatory activities. • Engage with GSS People Committee to feedback on the importance of communication and policy knowledge.
2. People have confidence in the statistical system	Promote a culture which: • Enables statisticians to resource teams to undertake user engagement activities. • Develops influencing and engagement skills. • Supports production of outputs which cross organisational	• Continue to develop cross-organisational links to support analytical priorities. • Make a more widespread commitment to voluntary adoption of the Code for analytical outputs which are not official statistics.	• Learn from the recent good practice seen across government, in identifying important questions and how to answer them. • View the statistical system as a whole, challenging themselves to consider priorities in the context of society's most important issues, rather than	• Highlight the importance of user engagement. • Champion the development of cross-departmental and cross-sectoral analytical priorities. • Encourage appropriate use of data linkage and innovation.

	boundaries, and fill key evidence gaps. • Encourages data linkage and innovation to answer society's key questions. Commit to: • Demonstrating best practice in their own use of statistics and evidence, both internally and when quoting data publicly, and publishing data and explanations for all figures used publicly. • Allowing statisticians to engage directly with the media to explain outputs. • Engage analysts early in briefings and policy development.		organisational responsibilities. • Learn lessons from cross-UK work on user engagement. • Work with external organisations and academics, actively creating a collaborative approach to projects. • Seek opportunities to engage more directly with a range of users, including directly with the media, to promote the statistics they produce and enable their appropriate interpretation.	• Continue to highlight examples of unpublished or misleading data and recognise examples of good practice. • Continue to advocate and promote the voluntary application of the Code pillars for sources of analysis and data that are not official statistics.
3.Statisticians feel empowered to provide leadership	• Raise profile of statisticians and analysts. • Give statisticians and analysts opportunities to demonstrate leadership. • Support fit for purpose IT systems.	• Make time to build networks in and outside organisations and learn from others. • Undertake activities to build a strong identity for statisticians across the organisation, to help share knowledge and give them more influence	• Seek opportunities to demonstrate leadership across a wide portfolio of work and across technical and policy facing roles • Develop the skills and experience needed to be innovative and pragmatic in addressing (and anticipating) the needs of	• Look at ways to support statistical leaders. • Consider opportunities to involve HoPs in peer review of OSR projects. • Consider benefits of newer analytical software.

	• Continue to cultivate a culture where statisticians are empowered to demonstrate leadership irrespective of grade.	• Make the case for systems and technology required for statisticians to demonstrate their value. • Communicate more visibly how the GSS and Analysis function fit together to make it easier for statisticians to communicate their value. **BPI** should: • Consider further training and guidance to highlight aspects of the Code most relevant in a policy setting.	decision makers, while retaining professional integrity	
4.Statisticians feel positive about their career development and prospects		• Highlight examples of statisticians and other analysts moving on to senior non-statistical roles. • Seek to more effectively manage career pathways, Including offering mentoring, shadowing, secondments and career conversations. • Encourage informal, on-the-job, and formal training, including focusing on strengthening communication skills.	• Support diversity and inclusion across their organisations. • Proactively seek opportunities to develop technical and broader communication skills throughout careers, through a mixture of training, secondments and different analytical roles • Contribute relevant career and diversity information through relevant official channels to enable a better understanding of the overall	• Work with those who deliver talent management and mentoring programmes, including the GSS People Committee, to champion the need for clear and effective career support and management for statisticians at all levels. • Work with groups like the GSS People Committee to make sure that the training that is on offer to statisticians is clear and meets their needs.

		GSS People Comm. should: • Regularly collect and publish consistent information on the characteristics of the GSS and GSG workforce. • Explore options for increasing the size of Fast Stream statistician cohorts • Support statisticians to develop career pathways which focus on technical specialist or broader skills	profile of the GSS workforce	• Support statisticians in the communication of statistics and data by championing the principles of the Code of Practice throughout its regulatory activity

List of annexes

Annex A: Statistics on government statisticians and analysts
Annex B: Outline of current analytical career pathways
Annex C: Glossary

Annex A: Statistics on government statisticians and analysts

The charts in this annex have been produced using a range of sources, including published headline data and the analysis of headline Civil Service People Survey (CSPS) data for Great Britain provided on request. Figures cover Great Britain only, with the exception for Figure A1 which also includes data for Northern Ireland. Links to the published headline data sources are provided under each figure, with additional data tables for the charts based on requested CSPS data.

Descriptive Statistics

Figure A1: Civil service statistical posts by government department
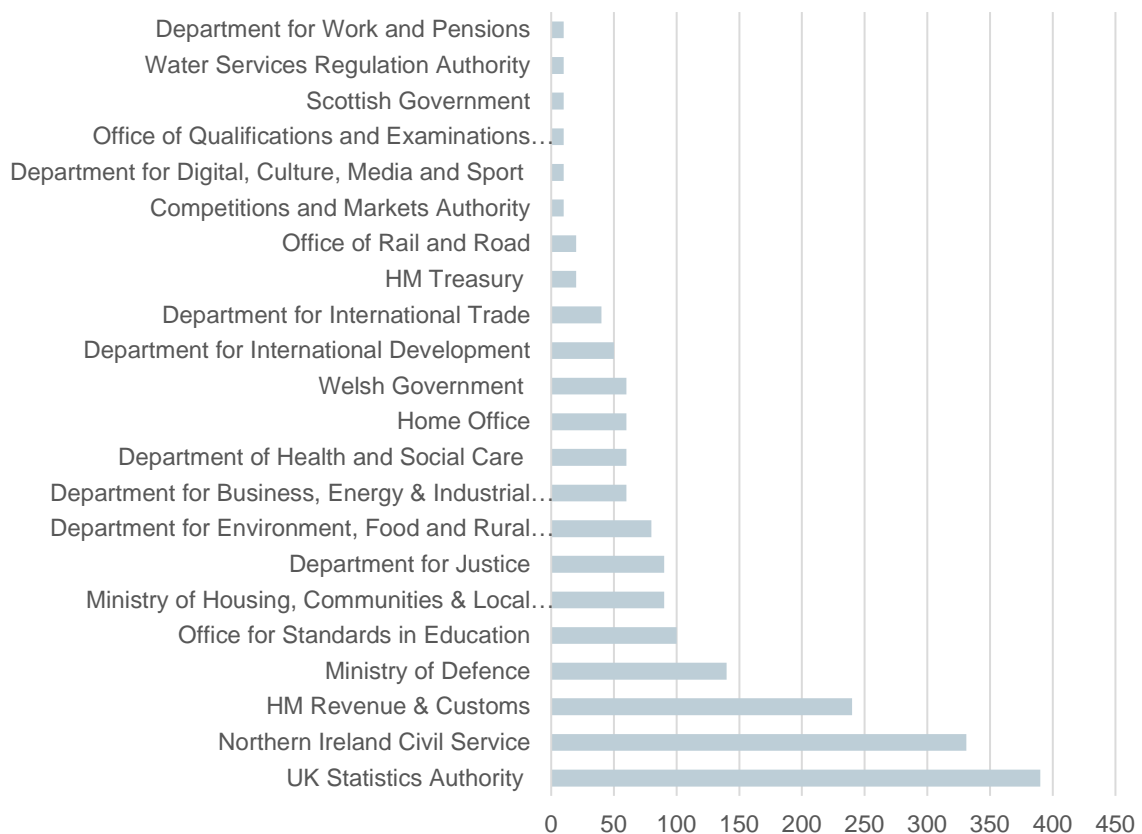
Source: Civil Service Statistics & Northern Ireland Civil Service Personnel Statistics, 2020

There are at least 1900 statistical posts spread over 30 government departments. **However, this is known to be underestimate due to a lack of professional group reporting by some departments in Civil Service Statistics and imprecision in matching people to posts – for example, DWP is one of the largest analytical communities but is showing as one of the smallest.** This is an example of the lack of robust public information about the number and distribution of statisticians across government. We look forward to seeing better data published in the near future.

Figure A2: Percentage of civil service analytical professions employed in London
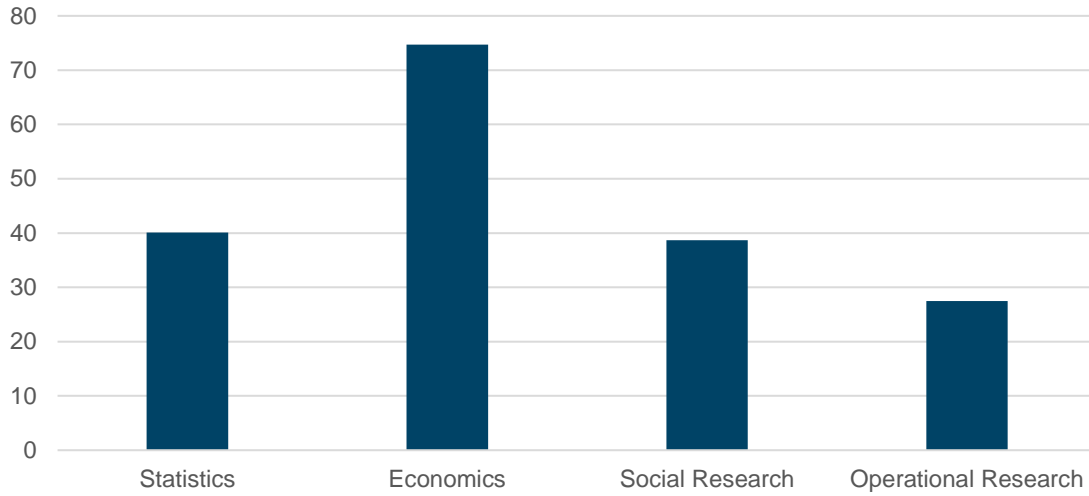
Source: Civil Service Statistics, 2020

About 40% of statistical posts are based outside London, while three quarters of economics posts are based in London.

Figure A3: Lower quartile, median, and upper quartile of salary by analytical profession
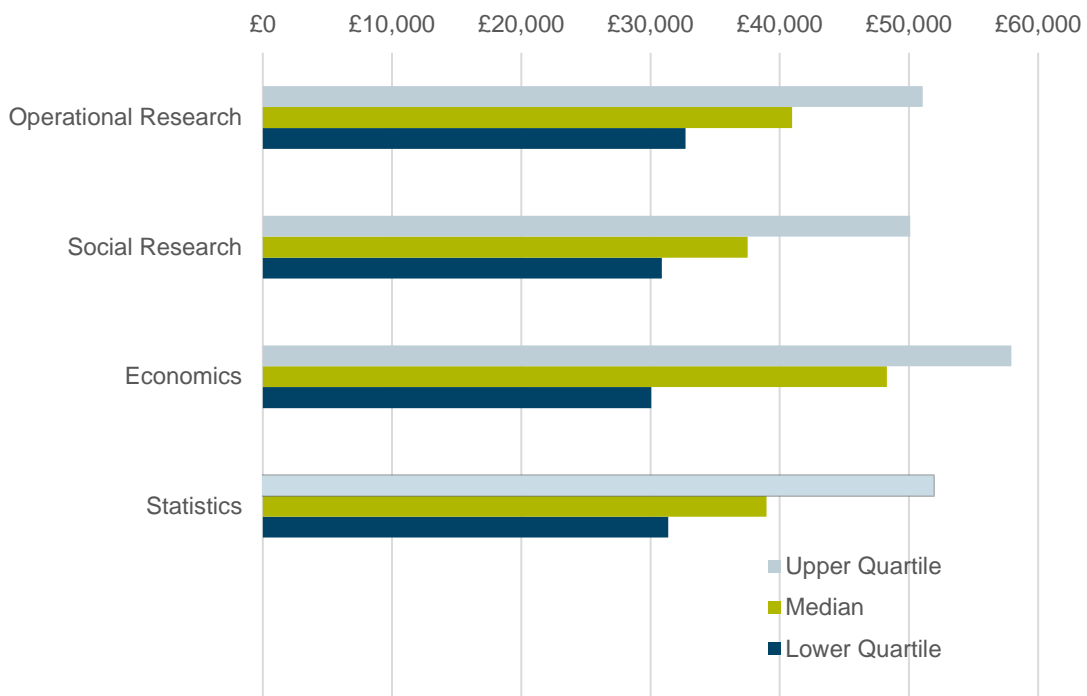
Source: Civil Service Statistics, 2020

Statisticians salary distribution is comparable with that for social researchers. While they generally earn more than operational researchers at different points in the earnings distribution, they earn less than economists whose median earnings are similar to statisticians' upper quartile earnings. Place of work should be considered alongside this finding, as a large majority of economists' post are in London (Figure A2).

Figure A4: CS Fast Stream appointment recommendations by scheme, 2016-2018
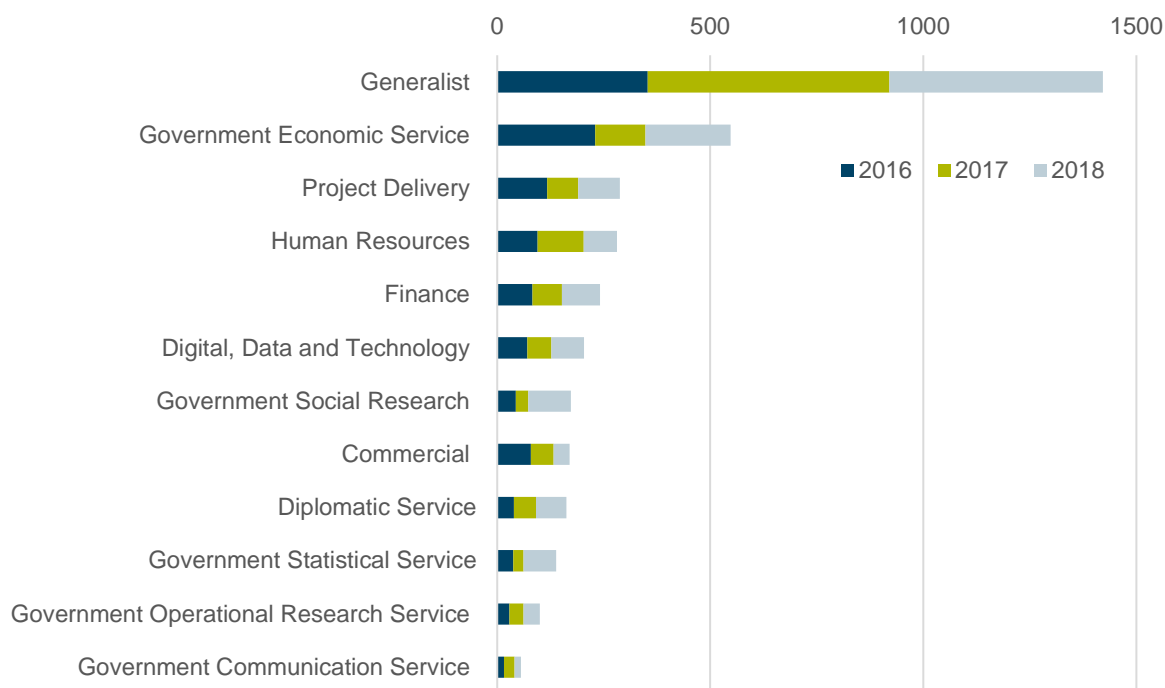
Statisticians make up one of the smallest numbers of Fast Stream analysts recommended for appointment with only 138 statisticians recommended between 2016-2018 compared to 538 economists and 173 social researchers in that period.

Fast Stream scheme	2016	2017	2018
Generalist	353	567	501
Government Economic Service	230	118	200
Project Delivery	117	73	98
Human Resources	95	108	78
Finance	83	69	89
Digital, Data and Technology	71	56	77
Government Social Research	44	29	100
Commercial	79	53	38
Diplomatic Service	39	52	71

Government Statistical Service	38	24	76
Government Operational Research Service	29	33	38
Government Communication Service	16	25	15

Source: Analysis of Cabinet Office Fast Stream intake report, 2016-2018

Figure A5: Proportion of Fast Stream applications and appointments by first degree subject (2016)
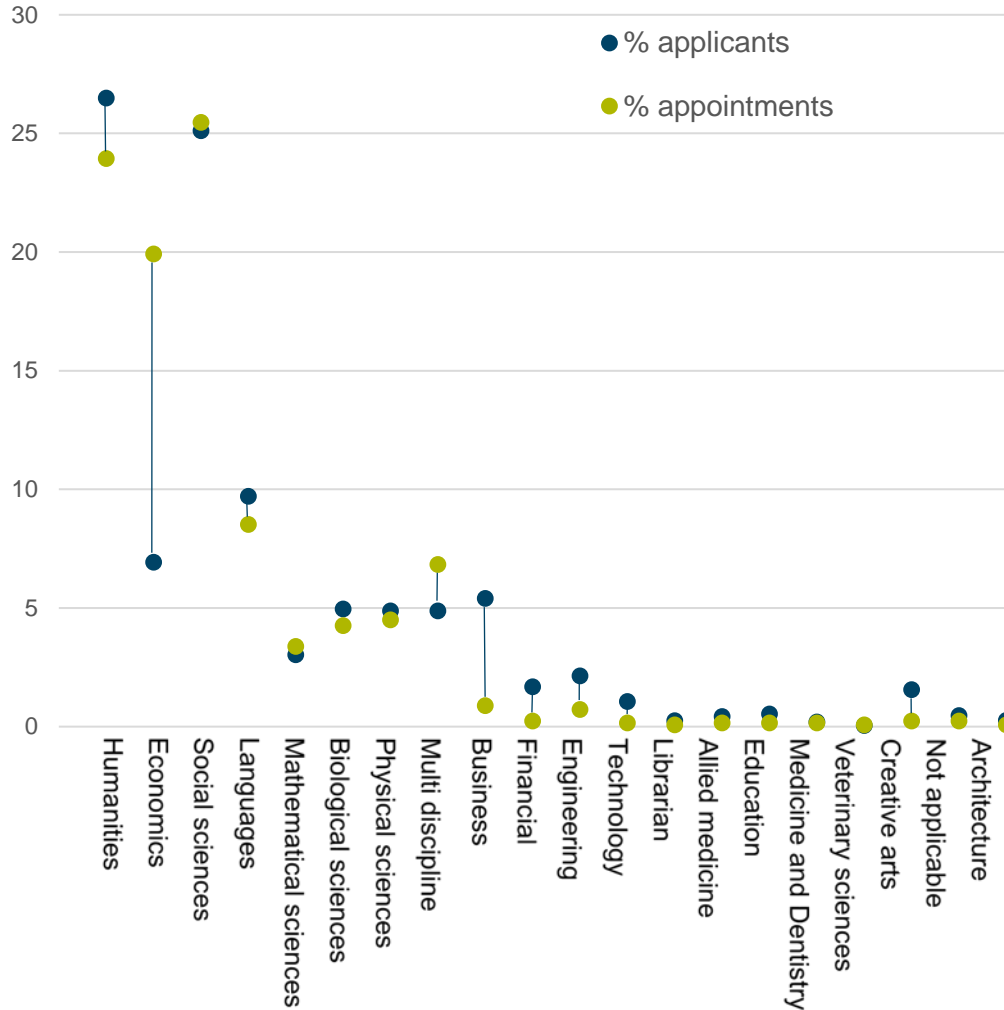
Government statisticians come into the Fast Stream from a range of academic disciplines, including mathematics, the physical and the social sciences. Economics graduates have clearer and more direct links with Fast Stream routes into the civil service than other professions that come from a range of subject backgrounds. In 2016, around a fifth of all Fast Stream appointments came from an economics academic background though they made up less than 7 per cent of applications. Social science graduates made up around a quarter of appointments from a similar proportion of applications, as did Humanities graduates.

First degree subject	Applications	Appointments
Humanities	26.5	23.9
Economics	6.9	19.9
Social sciences	25.1	25.5
Languages	9.7	8.5
Mathematical sciences	3.0	3.4
Biological Sciences	5.0	4.3
Physical sciences	4.9	4.5
Multi discipline	4.9	6.8
Business	5.4	0.9
Financial	1.7	0.2
Engineering	2.1	0.7
Technology	1.1	0.2
Librarian	0.3	0.1
Allied medicine	0.4	0.2
Education	0.5	0.2
Medicine and Dentistry	0.2	0.2
Veterinary sciences	0.1	0.1
Creative arts	1.6	0.2
Not applicable	0.5	0.2
Architecture	0.3	0.1

Source: Analysis of Cabinet Office Fast stream intake report, 2016

Civil Service People Survey Results

The Civil Service People Survey looks at civil servants' attitudes to and experience of working in government departments. The Civil Service People Survey covers 102 Civil Service organisations, including government departments, executive agencies and Crown non-departmental public bodies. It does not cover the Northern Ireland Civil Service. There is a separate NICS People Survey, with headline results for the NI People Survey published.

Notes on data presentation:

- All figures except the Employee Engagement Index are percent positive, rounded to the nearest integer. The Employee Engagement Index it is not the

percent positive, it is a weighted average across the full 5-point scale for the 5 engagement questions.

- Values were suppressed where the respondent count was less than 10
- Analysts in the CS People Survey are self-identified, rather than confirmed, badged members
- Where analysts have indicated that they were on a current or previous Fast Stream scheme, it isn't necessarily the scheme associated with their profession (e.g. GSS, GES, GSR), though this is likely.

Figure A6: Civil Service People Survey headline scores for all civil servants and selected analytical professions, 2019
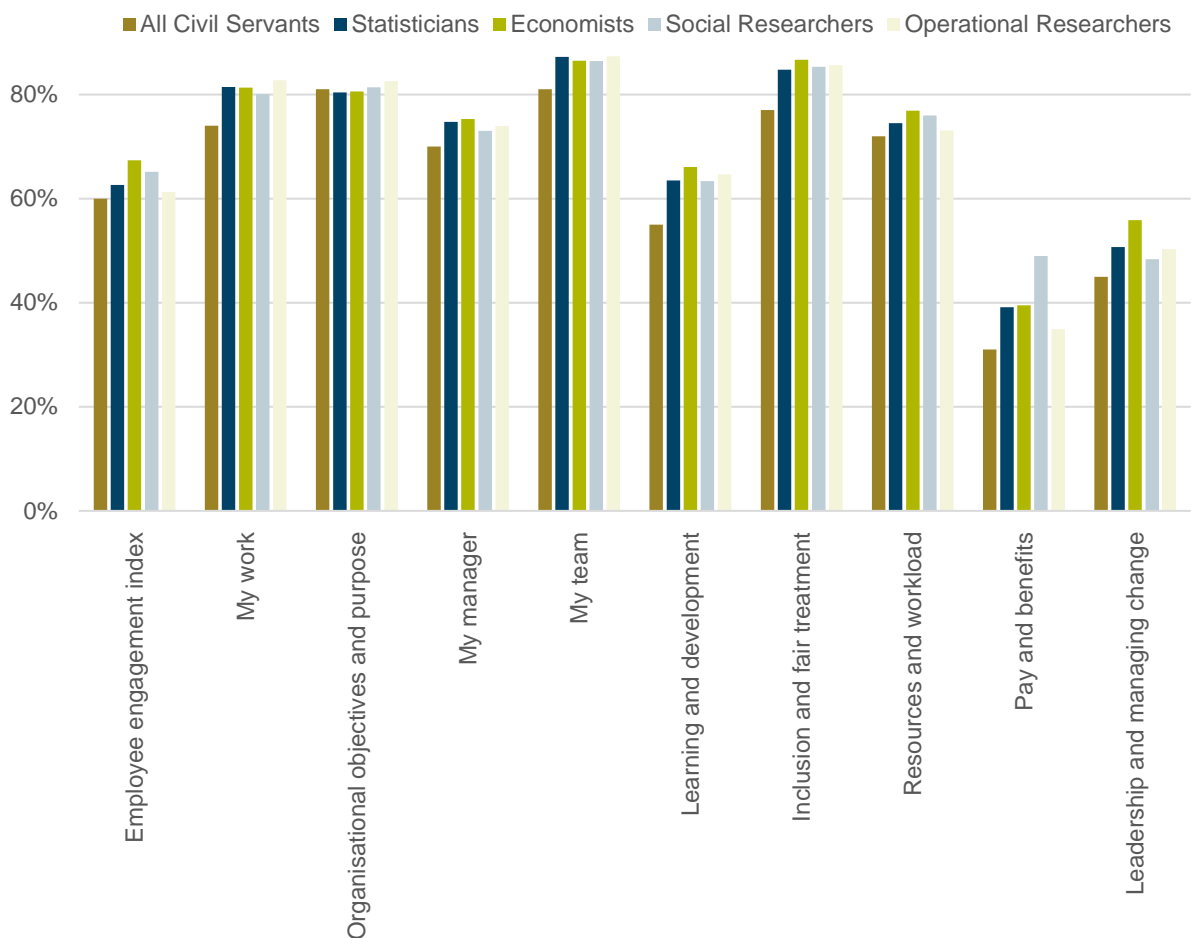
Source: Civil Service People Survey, 2019.

Statisticians generally have similar scores to other analysts for the 10 headline measures. Compared to scores for all Civil Servants, statisticians mean score was one percentage point lower for 'organisational objectives and purpose' and eight percentage points higher for 'pay and benefits', 'learning and development' and inclusion and fair treatment'.

Figure A7: There are opportunities for me to develop my career in my organisation
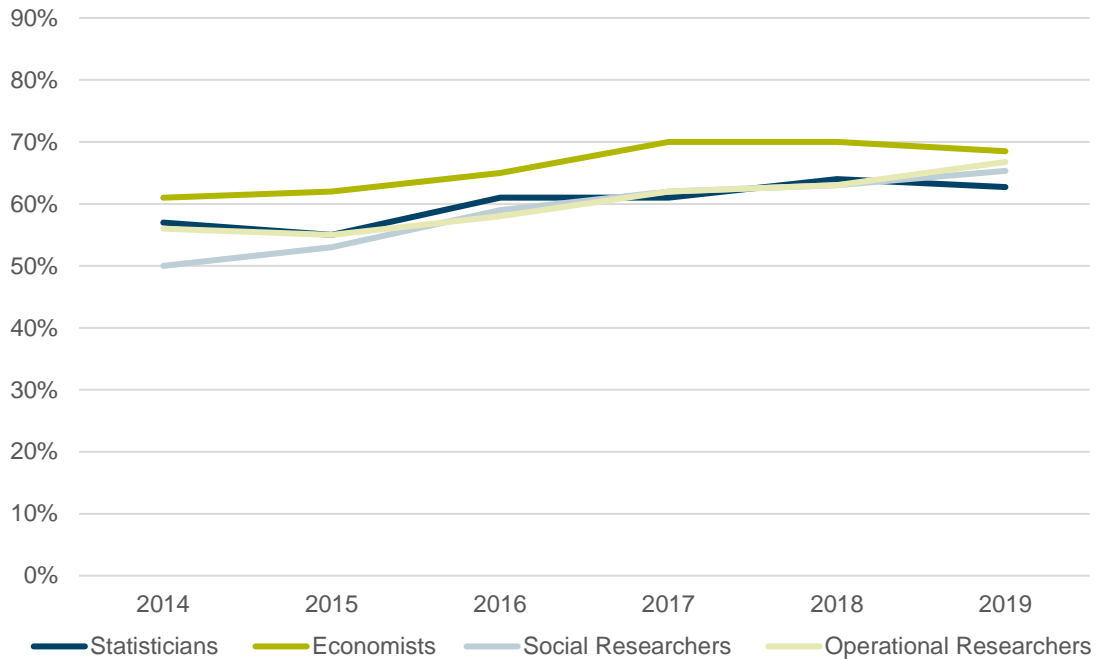
Source: Civil Service People Survey, 2014-2019

There was not much variation in the scores for how likely analysts were to think there were opportunities for them to develop their careers within their organisations in 2019.

Figure A8: There are opportunities for me to develop my career in my organisation by profession and number of years working in the organisation 2019
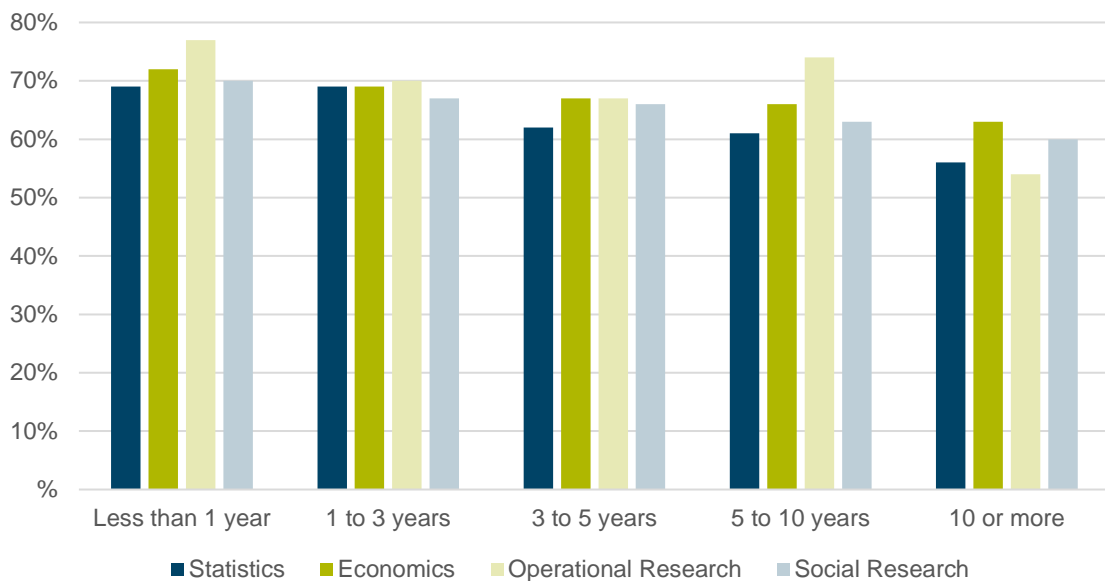
Statisticians appear to have similar views to other professions over time, though appear to be less positive than other professions in the 3 to 5-year period.

	Statistics	Economics	Operational Research	Social Research
Less than 1 year	69%	72%	77%	70%
1 to 3 years	69%	69%	70%	67%
3 to 5 years	62%	67%	67%	66%
5 to 10 years	61%	66%	74%	63%
10 or more	56%	63%	54%	60%

Source: Data request provided based on Civil Service People Survey, 2019

Figure A9: There are opportunities for me to develop my career in my organisation by profession and by whether or not they have participated in a current or previous Fast Stream scheme, 2019
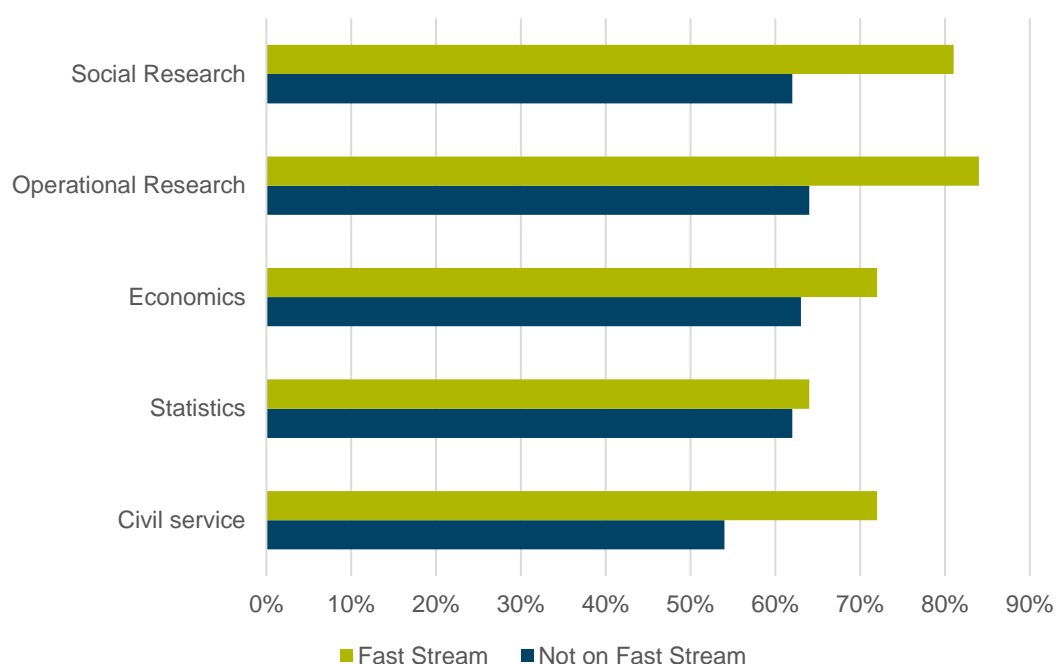
Fast Streamers are generally more positive about opportunities to develop their careers than those who have not been part of the Fast Stream. However, this difference in views is not seen for the statistics Fast Stream with the positive responses being lowest for the statistics Fast Stream compared to others.

	Civil service	Statistics	Economics	Operational Research	Social Research
Not on Fast Stream	54%	62%	63%	64%	62%
Fast Stream (current or previous)	72%	64%	72%	84%	81%

Source: Data request from Civil Service People Survey, 2019

Figure A10: I have a clear understanding of my organisation's objectives
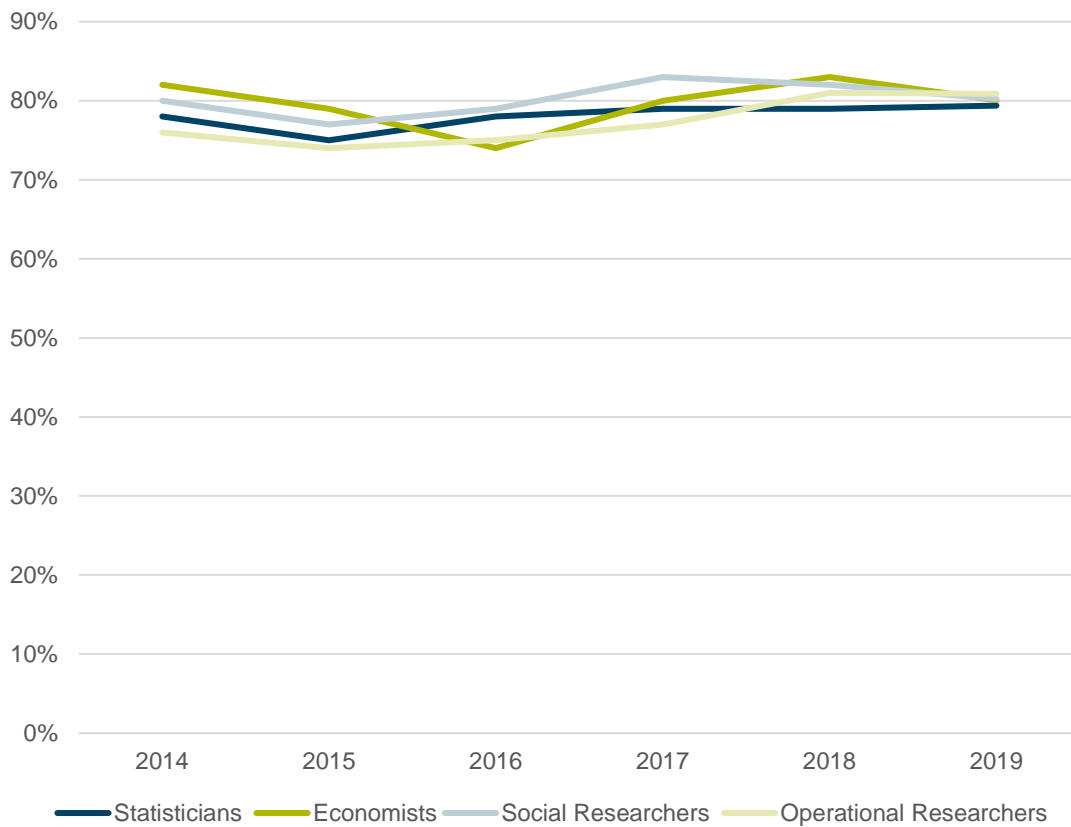
Source: Civil Service People Survey, 2014-2019

The latest results indicate that all analytical professions have a similarly clear understanding about their organisations objectives.

Figure A11: I have a clear understanding of my organisation's objectives by profession and whether or not been on a current or previous Fast Stream scheme, 2019
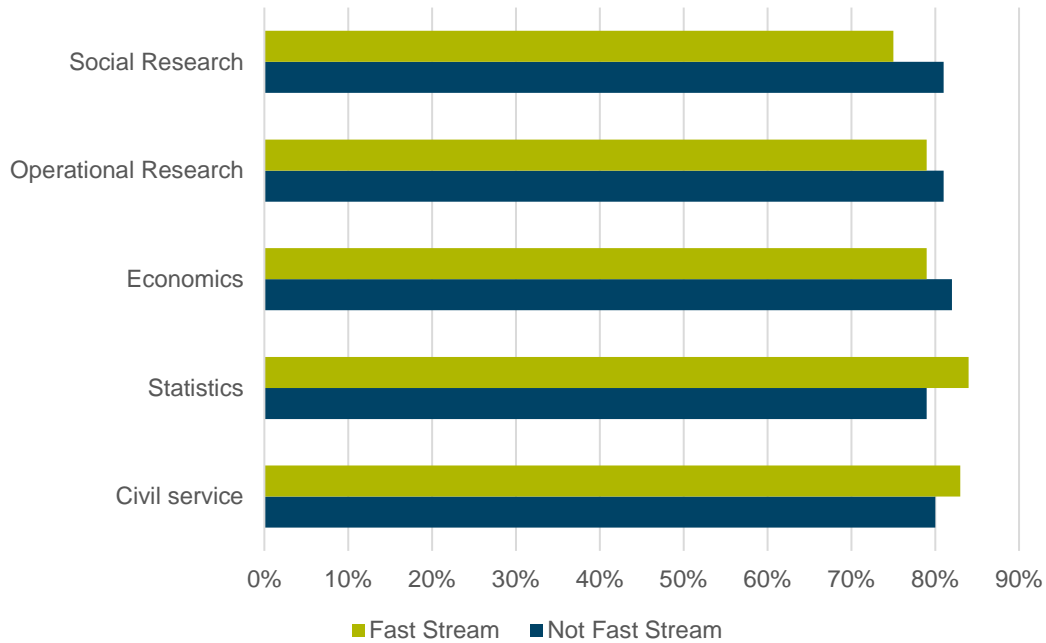
There is little difference between analysts' views on their understanding of their organisations' objectives dependent on whether they have been participants in the Fast Stream or not (current or previous Fast Streamers).

	Civil service	Statistics	Economics	Operational Research	Social Research
Not on Fast Stream	80%	79%	82%	81%	81%
Fast Stream (current or previous)	83%	84%	79%	79%	75%

Source: Data request from Civil Service People Survey, 2019

Figure A12: I understand how my work contributes to my organisation's objectives
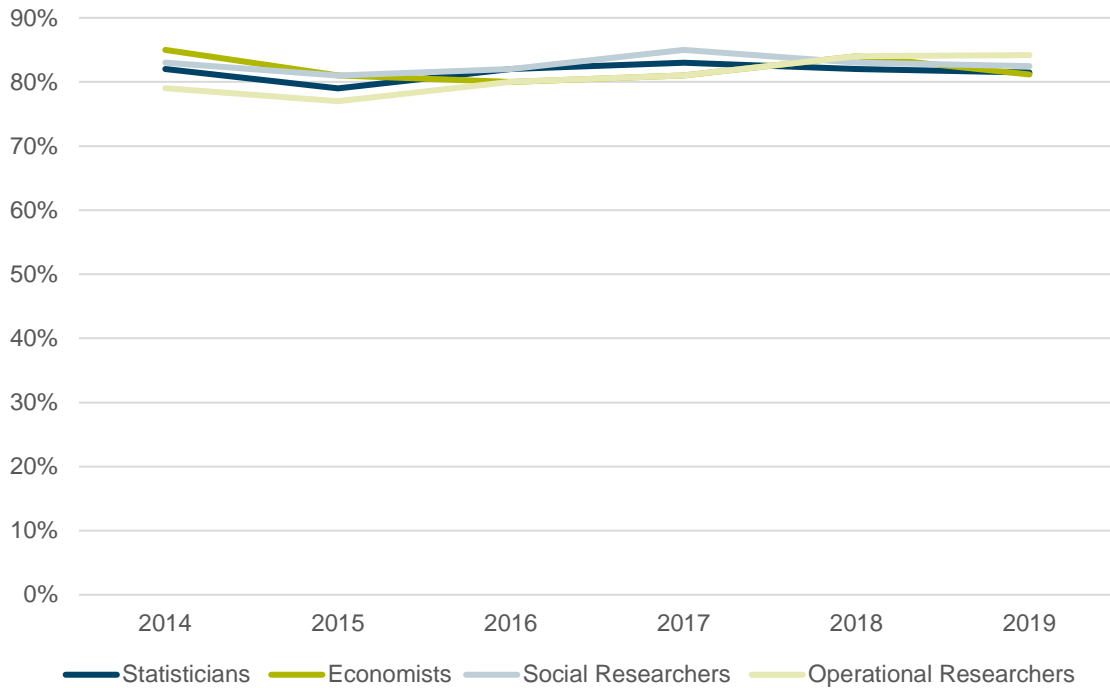
Source: Civil Service People Survey, 2014-2019

There is not much difference in analysts understanding about how their work contributes to their organisation's objectives over time or across professions.

Figure A13: I understand how my work contributes to my organisation's objectives by profession and whether or not been on a current or previous Fast Stream scheme, 2019
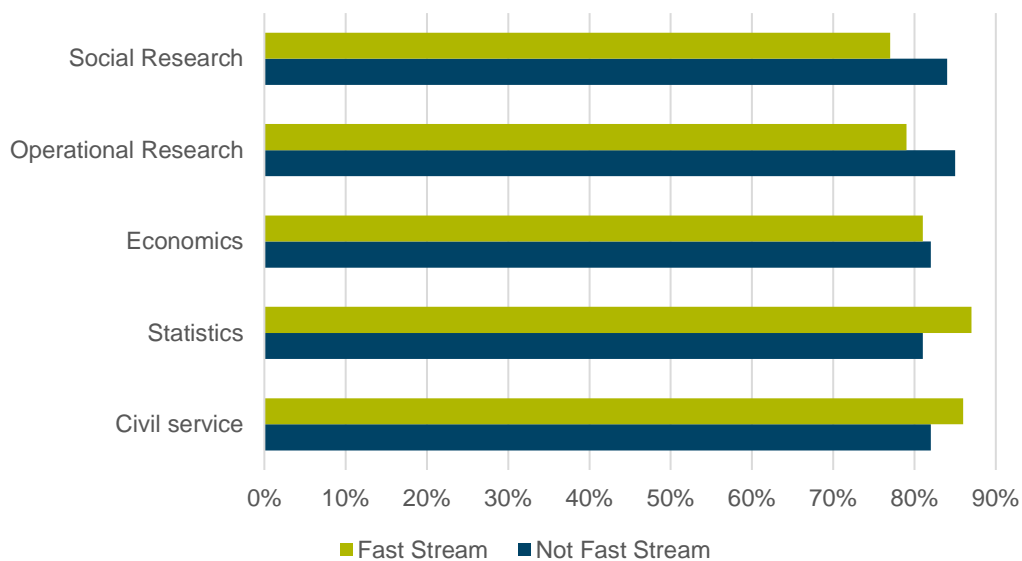
	Civil service	Statistics	Economics	Operational Research	Social Research
Not on Fast Stream	82%	81%	82%	85%	84%
Fast Stream (current or previous)	86%	87%	81%	79%	77%

Source: Data request from Civil Service People Survey, 2019

Analysts understanding of how their work contributes to their organisation's objectives doesn't seem to be influenced by whether they have been a Fast Streamer (current or previous).

Figure A14: I am proud when I tell others I am part of my organisation
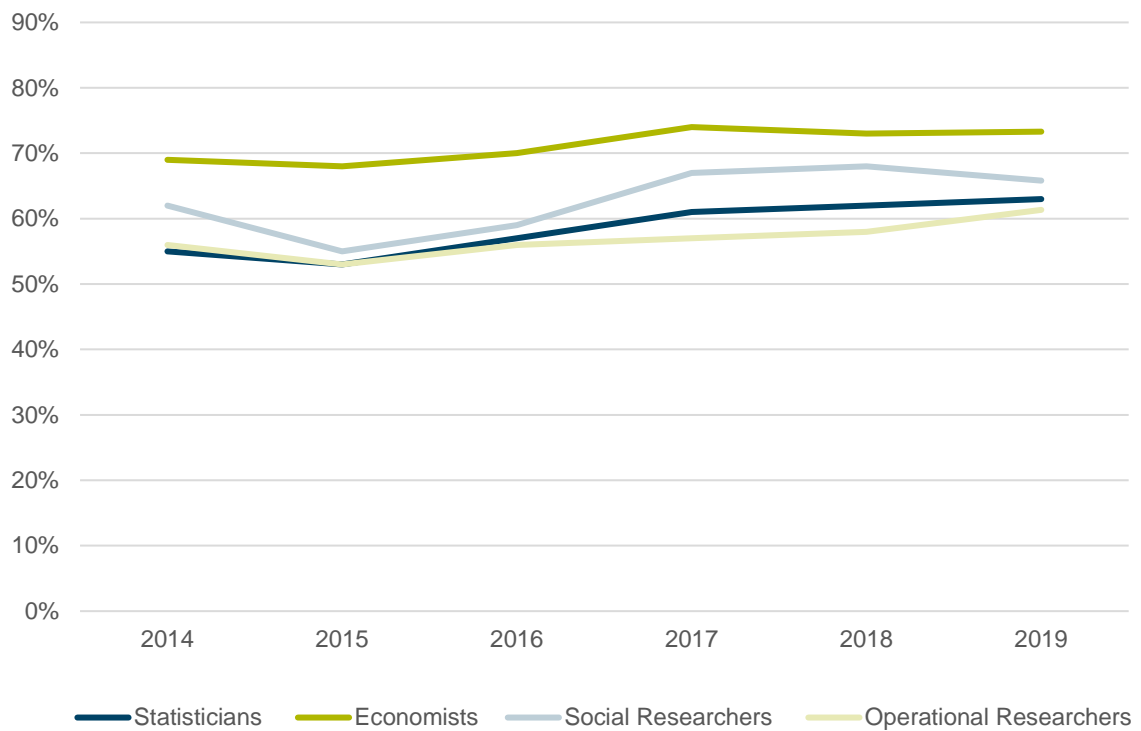
Source: Civil Service People Survey, 2014-2019

In 2019, more than 60 per cent of statisticians said they were proud tell others they are part of their organisation, however, this is consistently lower than the responses for economists.

Figure A15: I have the opportunity to contribute my views before decisions are made that affect me

Statisticians — Economists — Social Researchers — Operational Researchers
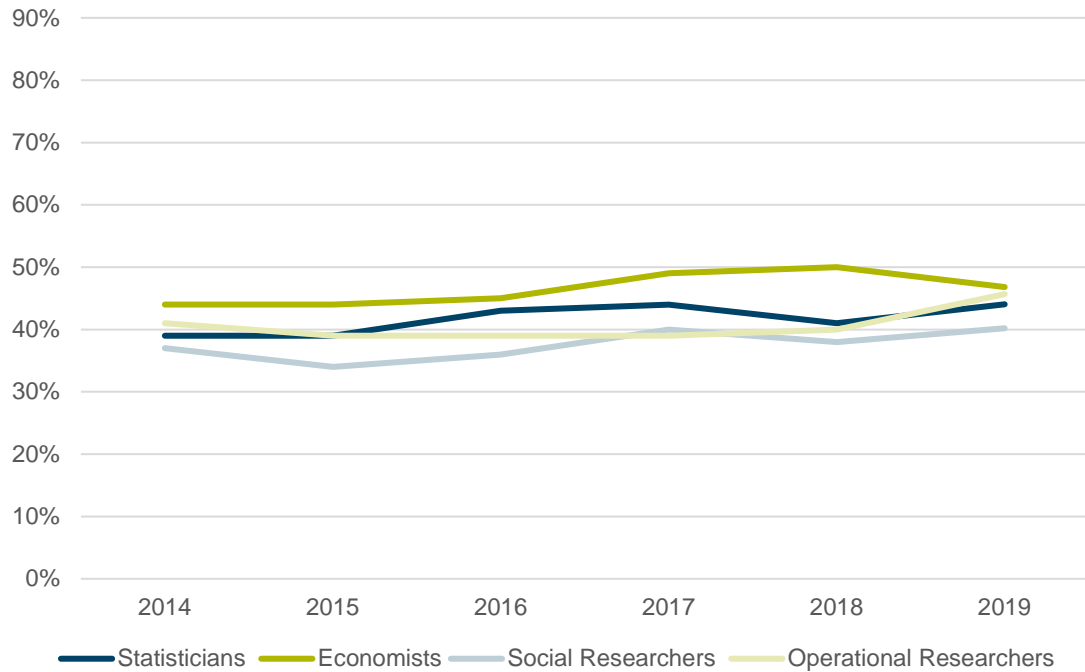
In all professions outlined, less than half of people considered that they had the opportunity to contribute their views before decisions are made that affect them.
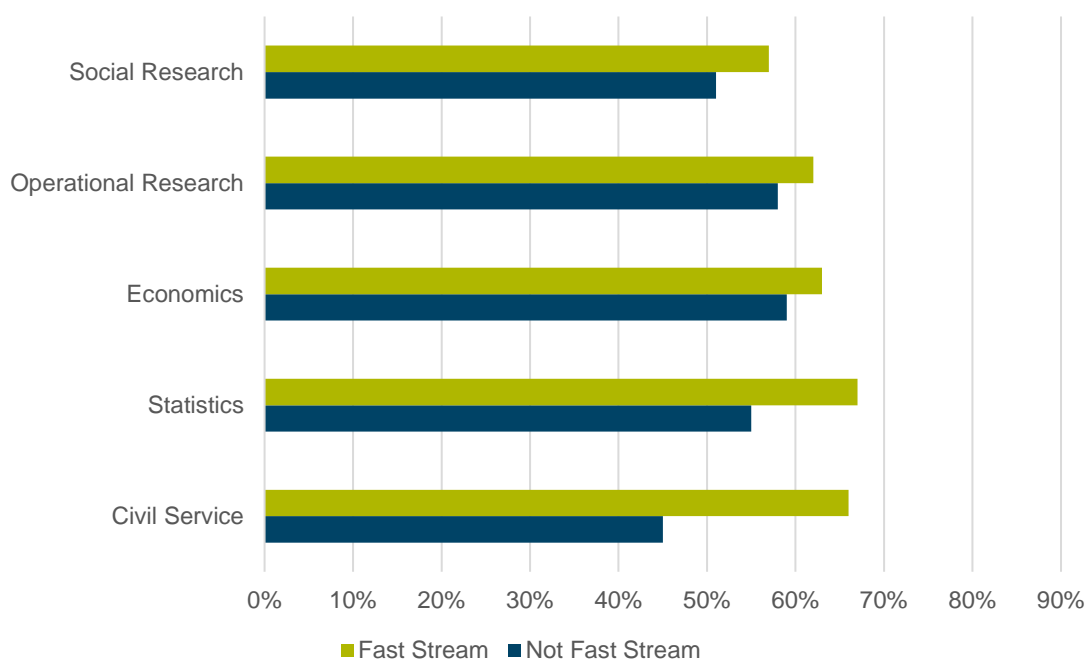
Figure A16: I think it is safe to challenge the way things are done in my organisation

Statisticians — Economists — Social Researchers — Operational Researchers
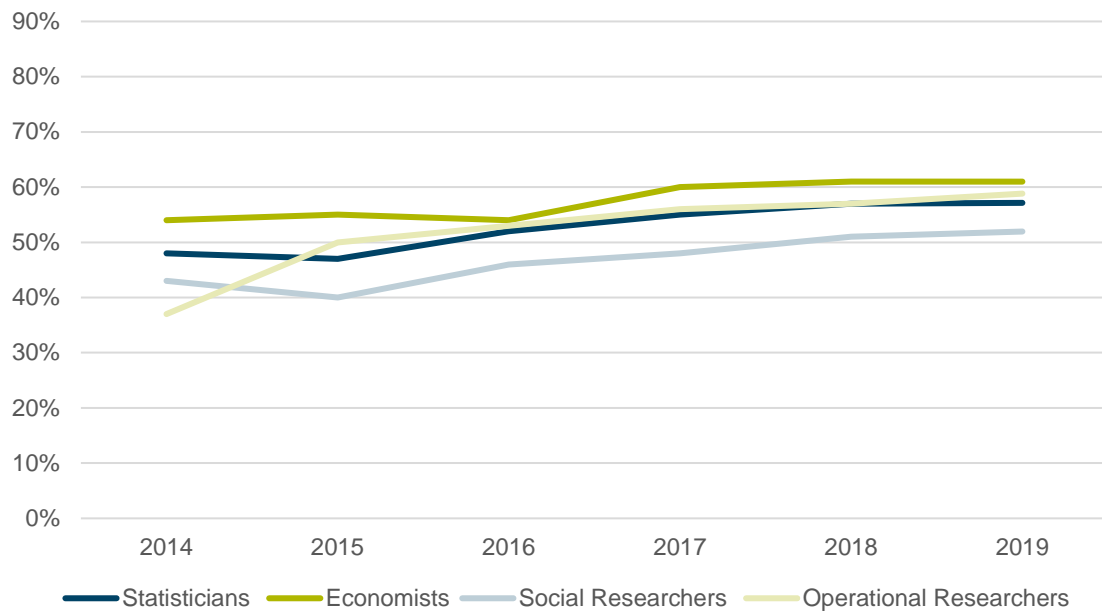
The percentage of statisticians that think it is safe to challenge the way things are done has increased 11 percentage points over the last 5 years.

Figure A**17:** I think it is safe to challenge the way things are done in my organisation by profession and whether or not been on a current or previous Fast Stream scheme, 2019


Individuals who have participated in the Fast Stream (current or previous) are more likely to think it is safe to challenge the way things are done. Statisticians on current or previous Fast Stream are the most likely of any group to think this is the case, similar to the all Civil Service Fast Stream figure.

	Civil service	Statistics	Economics	Operational Research	Social Research
Not on Fast Stream	45%	55%	59%	58%	51%
Fast Stream (current or previous)	66%	67%	63%	62%	57%

Source: Data request from Civil Service People Survey, 2019

Figure A18: I believe I would be supported to try a new idea, even if it may not work
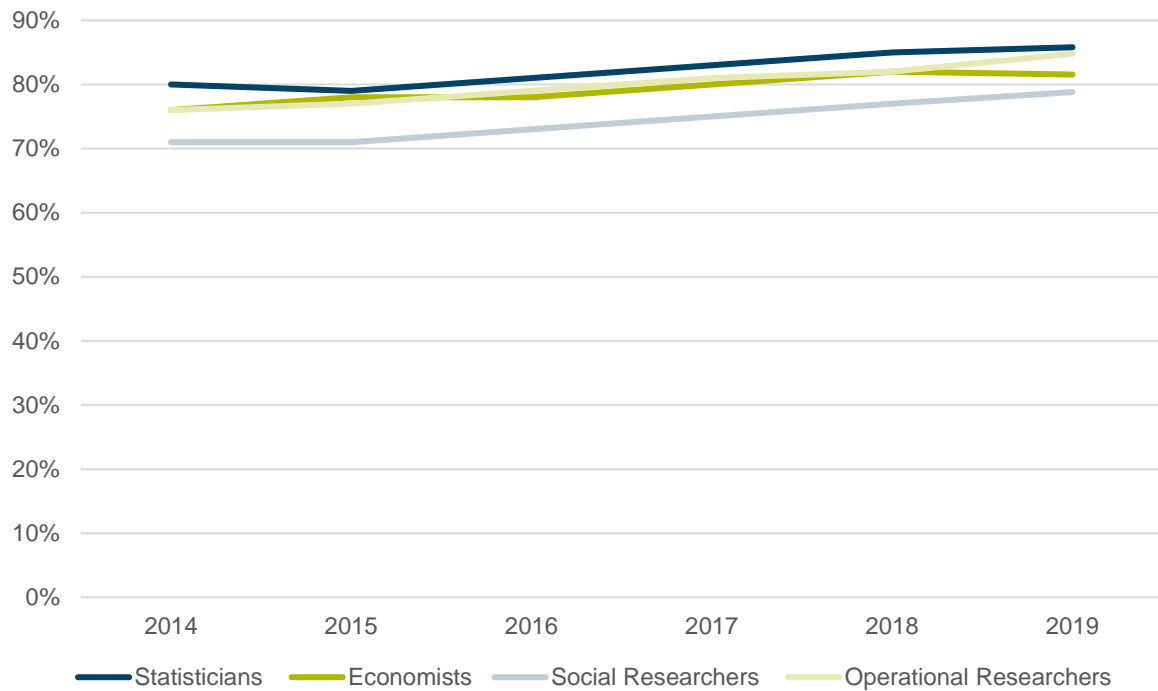
Source: Civil Service People Survey, 2014-2019

Statisticians are the most likely to think they will be supported to try a new idea, even if it may not work, but it is similar across all professions with very little difference in 2019.

Figure A19: The people in my team are encouraged to come up with new and better ways of doing things by profession and whether or not been on a current or previous Fast Stream scheme, 2019
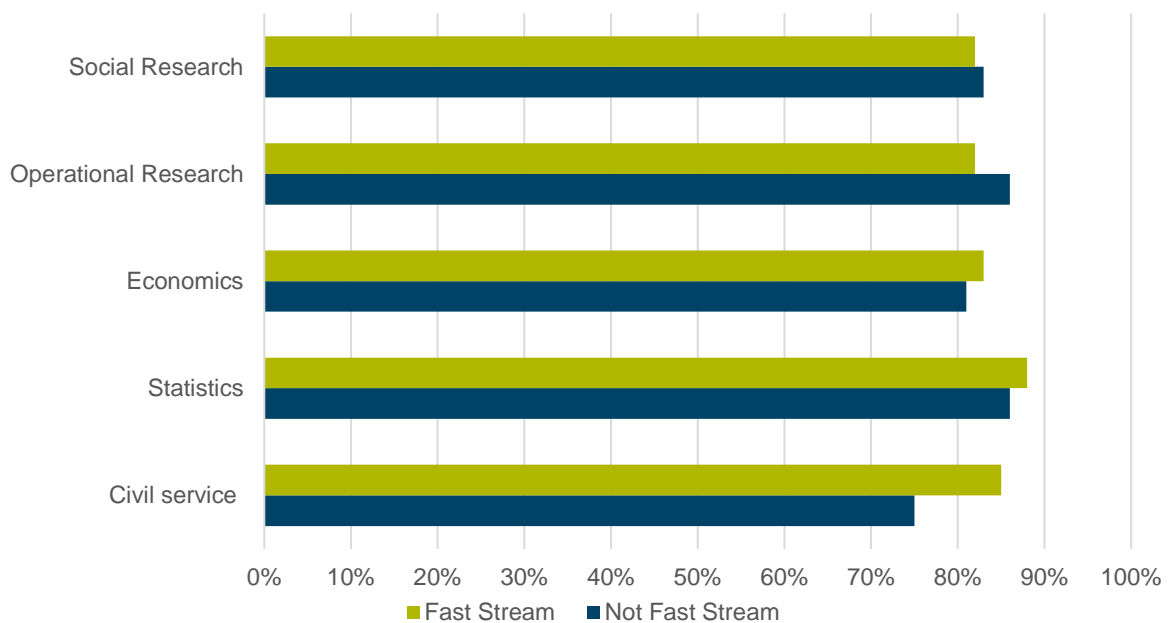
There is little difference between groups in their responses to whether the team are encouraged to come up with new and better ways of doing things.

	Civil service	Statistics	Economics	Operational Research	Social Research
Not on Fast Stream	75%	86%	81%	86%	83%
Fast Stream (current or previous)	85%	88%	83%	82%	82%

Source: Data request from Civil Service People Survey, 2019

Figure A20: I have the tools I need to do my job effectively
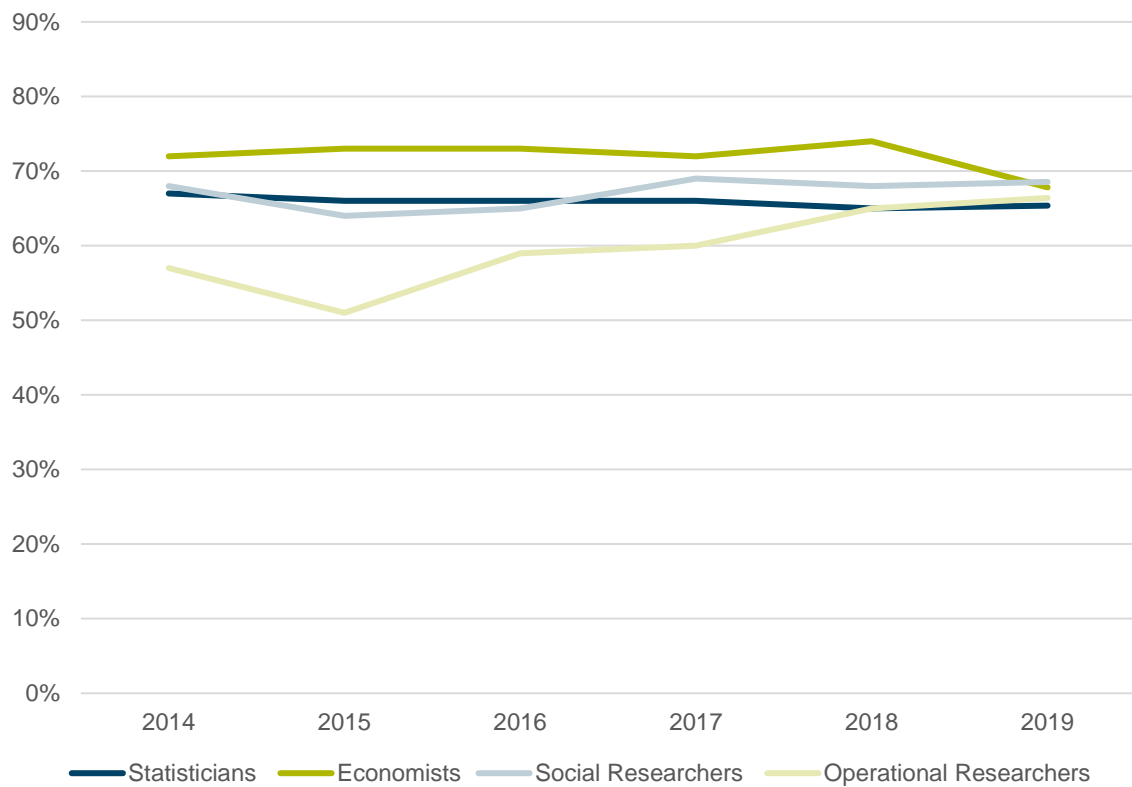
Source: Civil Service People Survey, 2014-2019

Around two thirds of analysts across all professions believe they have the tools they need to do their jobs effectively.

Figure **A21:** I have the tools I need to do my job effectively by profession and whether on current or previous CS Fast Stream (2019)
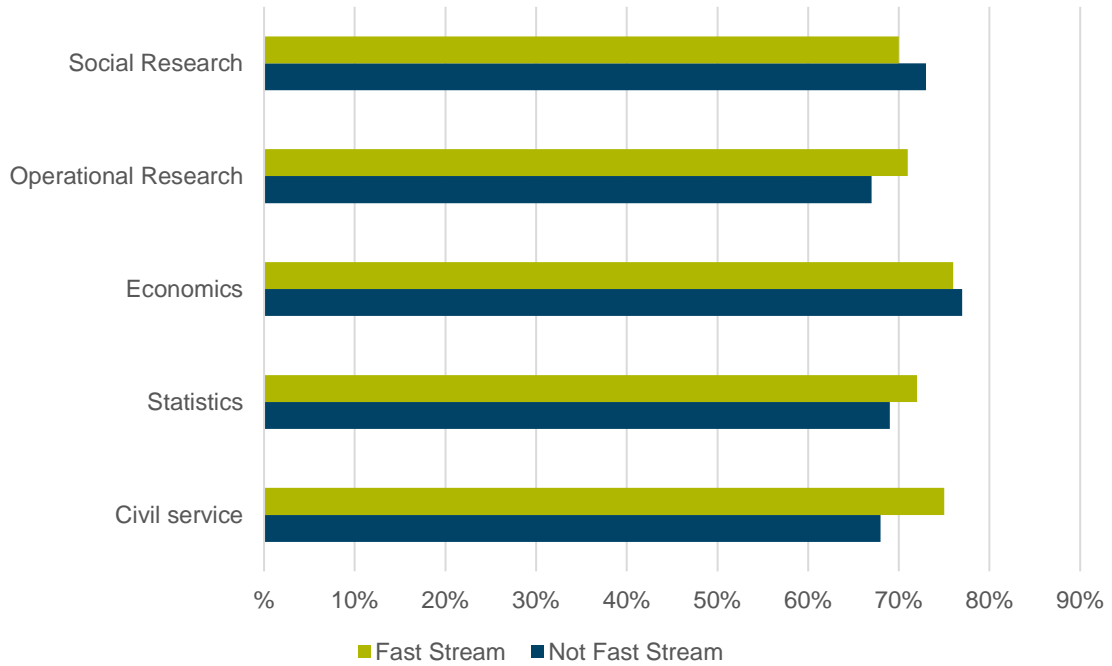

Whether an individual has participated in the Fast Stream appears to have little relationship to whether they believe they have the tools they need to do their jobs effectively.

	Civil service	Statistics	Economics	Operational Research	Social Research
Not on Fast Stream	68%	69%	77%	67%	73%
Fast Stream (current or previous)	75%	72%	76%	71%	70%

Source: Data request from Civil Service People Survey, 2019
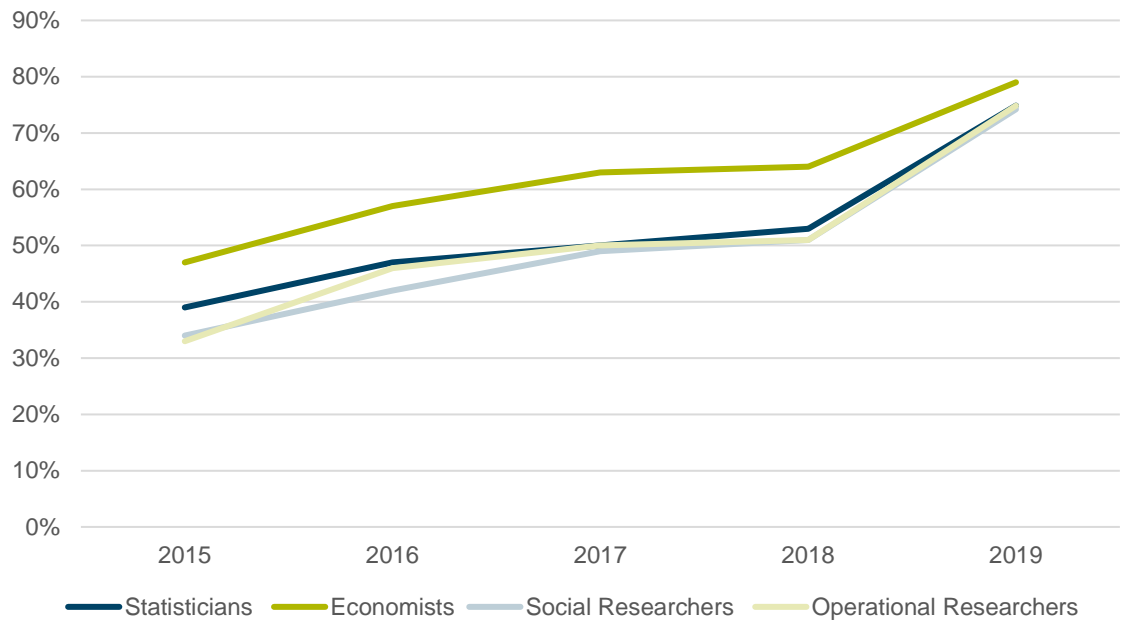
Figure **A22:** Senior managers in my organisation are sufficiently visible
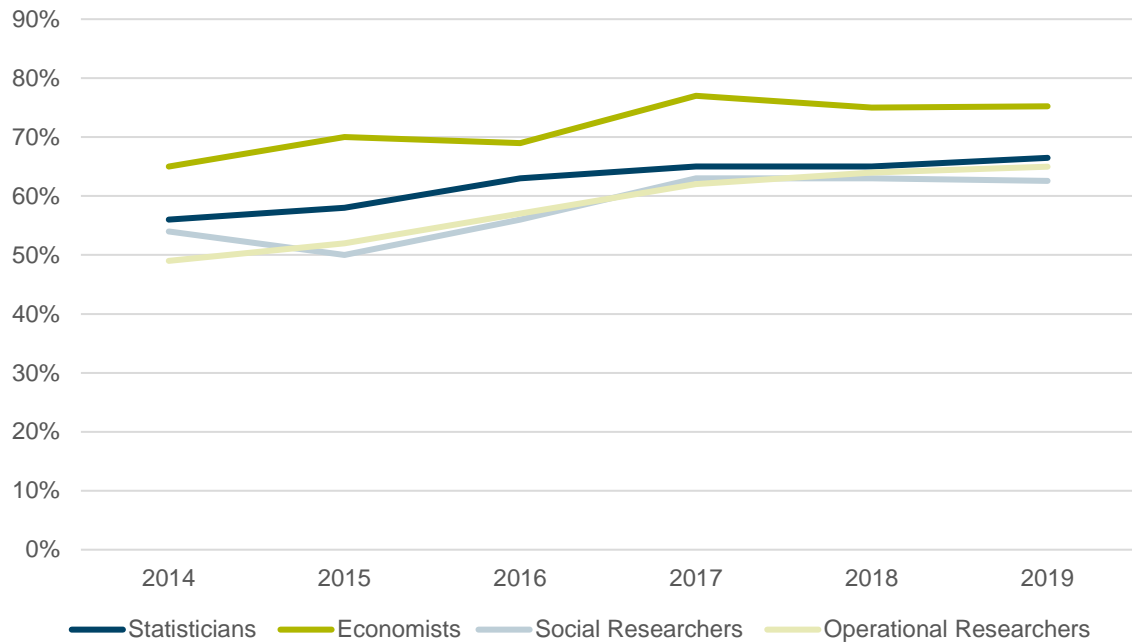
Source: Civil Service People Survey, 2014-2019

Economists are more likely than other analysts to think their senior managers are sufficiently visible.

Figure A23: Senior managers in my organisation actively role model the behaviours set out in the Civil Service Leadership Statement

Source: Civil Service People Survey, 2014-2019

All analysts increasingly feel their senior managers role model the behaviours set out in the Civil Service Leadership Statement. For statisticians there has been an increase from just under 40 per cent in 2015 to 75 per cent in 2019.

Figure A24: Senior managers in my organisation actively role model the behaviours set out in the Civil Service Leadership Statement by profession and Fast Stream (current or previous), 2019
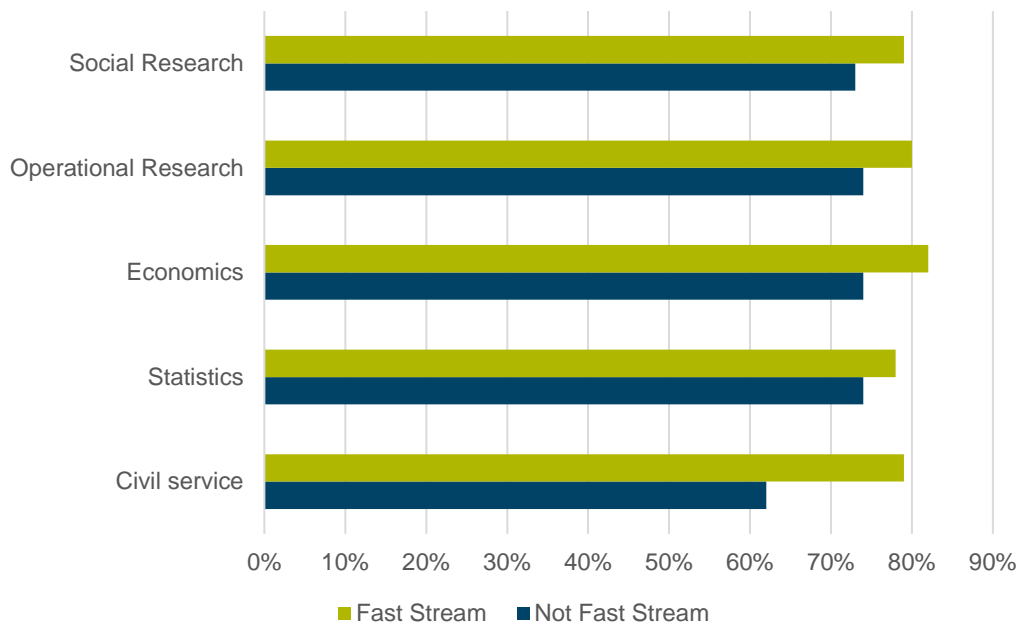
Fast Streamers (current or previous) are more likely to think senior managers role model the behaviours set out in the Civil Service Leadership Statement.

	Civil service	Statistics	Economics	Operational Research	Social Research
Not on Fast Stream	62%	74%	74%	74%	73%
Fast Stream (current or previous)	79%	78%	82%	80%	79%

Source: Data request from Civil Service People Survey, 2019

Diversity

Figure A25: Overall Civil Service employment by responsibility level and sex

Source: Civil Service Statistics, 2019

There are higher proportions of females at the lower responsibility level grades and higher proportions of males at the more senior grades.

Equality statistics for NI Civil Service (2020) are published separately (2019).

The Analysis Function is currently working to develop a new dataset based on badged members of the analytical professions which they aim to release in Spring 2021. This will help to improve understanding of the diversity of the function's members and improved statistics. The Analysis Function is also working to improve its analysis of the unbadged analytical community to build a picture and understanding of the numbers in this population.

Annex B: Outline of current analytical career pathways

Analysis Function career framework

https://www.gov.uk/government/publications/government-analysis-learning-and-development-brochure

https://www.gov.uk/government/publications/analysis-function-career-framework

Civil Service Talent Management

https://www.gov.uk/government/publications/civil-service-talent-management/civil-service-talent-management

GSG competency framework

https://gss.civilservice.gov.uk/learning-development/learning-pathway-for-the-government-statisticians-group/

GSS Fast Stream

https://gss.civilservice.gov.uk/careers/the-fast-stream/

https://www.faststream.gov.uk/government-statistical-service/index.html

https://www.faststream.gov.uk/media/1083/104238_gov_statistical_website_pdf_a4.pdf

ONS High Potential Programme

https://quarterly.blog.gov.uk/2018/10/17/spotlight-developing-the-leaders-of-tomorrow/

Annex C: Glossary

Analysis Function: The Analysis Function brings together a subset of the government professions, called the "analytical professions" (it does not cover the Northern Ireland Civil Service). The mission of the Analysis Function is to support the government to make better decisions by helping everyone easily access the advice, analysis, research and evidence they need, using consistent professional standards.

Best Practice and Impact division (BPI): The Best Practice and Impact (BPI) division in the Office for National Statistics supports everyone in the Government Statistical Service (GSS) to improve government statistics as part of its wider remit to support Government Analysis. The division is made up of the Good Practice Team (GPT), the Data Quality Hub, the Harmonisation Team, and the GSS Methodology Advisory Committee (GSS MAC).

Civil Service People Survey: The Civil Service People Survey looks at civil servants' attitudes to, and experience of working in government departments. The People Survey runs annually in over 100 organisations. It does not cover Northern Ireland.

Code of Practice: [The Code of Practice for Statistics](#) provides producers of official statistics with the detailed practices they must commit to when producing and releasing official statistics. The framework for the Code of Practice for Statistics is based on three pillars:

- **Trustworthiness** is about having confidence in the people and organisations that produce statistics and data

- **Quality** is about using data and methods that produce assured statistics

- **Value** is about producing statistics that support society's needs for information

GSS: The Government Statistical Service (GSS) is the cross-government community of all those involved in the production of [official statistics](#) in the UK. This means the GSS is made up of statisticians, data scientists, researchers, economists, policy experts, business support teams, data journalists, data visualisation experts, methodologists, media experts etc. It does not include the Northern Ireland Civil Service, which works closely with the GSS and shares a common professional culture.

GSS People Committee: The People Committee supports the National Statistician and statistical Heads of Profession (HoPs) in developing and reviewing people policies and practice for the GSS community. It works to strengthen the Government Statistical Service (GSS) as a community for sharing best practice and team working. The committee also focuses on recruitment, personal development, talent management and retention for the Government Statistician Group (GSG), in line with the GSS strategy.

Head of Profession (HoP) or Chief Statistician: Each government department that produces official statistics has a statistical Head of Profession (HoP) who leads and manages statistical activities. The HoPs are accountable to their departmental management for day to day delivery, but also have a professional accountability to the National Statistician. Chief Statisticians in the Devolved Adminsitrations also have professional accountablity to the National Statistician.

NISRA: The Northern Ireland Statistics and Research Agency (NISRA) is the equivalent of the GSS in Northern Ireland. All statisticians working in the NI Civil Service are employed by NISRA. The Agency is the principal source of official statistics and social research on Northern Ireland. NISRA statisticians work across a wide range of Government Departments and Non-Departmental Public Bodies.

Office for Statistics Regulation (OSR): The Office for Statistics Regulation is the regulatory arm of the UK Statistics Authority. We provide independent regulation of all official statistics produced in the UK.

ONS: The Office for National Statistics (ONS) are the UK's largest independent producer of official statistics and its recognised national statistical institute. ONS are responsible for collecting and publishing statistics related to the economy, population and society at national, regional and local levels. ONS also conduct the census in England and Wales every 10 years.

Public Administration and Constitutional Affairs Committee (PACAC): The Public Administration and Constitutional Affairs Committee (PACAC) examines constitutional issues and the quality and standards of administration within the Civil Service.

UK Statistics Authority: The UK Statistics Authority is an independent body at arm's length from government. They have a statutory objective of promoting and safeguarding the production and publication of official statistics that 'serve the public good'. Their remit covers the three principal elements of the UK official statistics system:

- the Government Statistical Service (GSS), which is the cross-government community of all those involved in the production of official statistics

- the Office for National Statistics (ONS) which is the executive office of the UK Statistics Authority and the largest producer of official statistics in the UK

- the Office for Statistics Regulation (OSR) which is the regulatory arm of the UK Statistics Authority