

National Statistics Code of Practice

Protocol on Professional Competence

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Contents

Introduction	4
Scope	4
Exclusions	4
Purpose	4
Key roles and institutions	5
Compliance	6
Code of Practice – Statement of Principle	7
Putting the Principle into Practice – Key Commitments	8
National Statistician, Heads of Profession and Chief Statisticians	8
Managers	9
All staff involved in the production of National Statistics	9
A guide to putting the principles into practice	11
National Statistician	11
Heads of Profession	11
GSS Heads of Profession Committee	11
GSS Human Resources Committee	11
Statistician Competence Framework	12
Recruitment and promotion – standards and practices	13
Induction, training and development	13
Continuing professional development and the role of professional bodies	14
References	15
Annex A – The GSS Statistician Competence Framework	16

Introduction

For background information on this document please see *An Introduction to the National Statistics Code of Practice and its supporting Protocols*.

Scope

This protocol sets out how the National Statistician, Heads of Profession and Chief Statisticians in the devolved administrations will carry out their responsibility for setting standards for professional competence and expertise – as outlined in the *Framework for National Statistics* and the *National Statistics Code of Practice*. It also sets out the responsibilities of members of the Government Statistical Service (GSS) and others working on National Statistics to develop their competence, and the responsibility of managers to support that development.

Exclusions

More general standards for the quality management of National Statistics are covered in the *Protocol on Quality Management*.

Purpose

This protocol will help the Government Statistical Service and other producers of National Statistics to provide a world-class service, making a vital contribution to the effective and efficient management and development of the Government's knowledge base, and providing trusted, relevant and timely advice to policy formulation. It will also further their aim to provide leadership and support to the rest of the UK's public sector statistical service and to play a leading role in the international statistics community.

To achieve these aims, it is recognised that the GSS must provide a framework for all its members to make full use of their talents and give them opportunities to develop their professional skills. This includes all people in the Civil Service whose main work is to contribute to the delivery of statistical products and services, and not just those who are members of professional groups.

Key roles and institutions

The **National Statistician** is Head of the Government Statistical Service, sets standards for professional competence and has overall responsibility for the integrity of National Statistics.

Departmental **Heads of Profession** for Statistics and **Chief Statisticians in the devolved administrations** are accountable to the National Statistician for the quality of the National Statistics they produce within their departments. Where Heads of Profession are mentioned in the text, it is intended that Chief Statisticians are also included, as well as the Chief Executive of the Northern Ireland Statistics and Research Agency.

The **Government Statistical Service (GSS)** is the Civil Service community which produces the UK's National Statistics, and provides other statistics, statistical analysis, interpretation and advice to the UK Government and Devolved Administrations. It is the hub of the UK's public sector statistical service and includes people who have:

- relevant academic and other qualifications
- experience of working in statistical and analytical areas
- data collection and management skills
- data presentation skills
- other knowledge, experience and skills that are essential to the delivery of statistical products and services.

Statisticians working in Northern Ireland are not formally part of the Government Statistical Service. However, the Northern Ireland Statistics and Research Agency, Northern Ireland Departments and the Northern Ireland Office work closely with other departments in the UK to ensure common standards apply to the production of statistics. In the text, where there are references to the GSS, arrangements are in place to address similar issues in Northern Ireland.

For further information, please see *Framework for National Statistics*.

Compliance

Compliance with this *Protocol* will be measured as follows:

- Progress against the GSS Human Resources Committee's programme of work will be reported in the *National Statistics Annual Report*;
- Heads of Profession and Chief Statisticians will submit an annual report to the National Statistician covering the overall competence profile in their Department, and progress on continuing professional development.

The National Statistics Code of Practice – Statement of Principle

Professional competence will underpin all National Statistics activity, enhanced through training, research and reference to best international practice and professional expertise.

Putting the Principle into Practice – Key Commitments

1. The National Statistician, Heads of Profession and Chief Statisticians will:
 - a) provide professional leadership to staff working on National Statistics;
 - b) develop, implement, and regularly evaluate the effectiveness of the Human Resources Strategy for the GSS. This will contain clear aims and objectives relating to the recruitment, retention, development and training of GSS staff;
 - c) develop and maintain a Statistician Competence Framework which defines the general areas of knowledge and expertise expected of statistical staff working in the GSS and on National Statistics;
 - d) regularly review the overall competence profile of their area of responsibility;
 - e) set the standards and competences to be demonstrated by candidates at recruitment;
 - f) maintain induction, training and development programmes to support the Statistician Competence Framework and to encourage best practice;
 - g) support the continuing development of all staff and invest in their training;
 - h) Facilitate the transfer of GSS staff within and between departments both as part of an individual's career development and as a means of spreading best practice and new ideas.

2. Managers will:

- a) use the statistician and other competence frameworks to define the requirements of posts;
- b) ensure that new recruits and staff moving post receive both general and job-specific induction training;
- c) ensure that the development and training needs of all staff are regularly assessed and appropriate action taken;
- d) ensure all staff have access to continuing development and training opportunities relevant to both general civil service competencies and core statistical competences;
- e) ensure that development and training activities are regularly evaluated;
- f) support the arrangements for the continuing development of staff;
- g) take appropriate opportunities to advance public understanding of statistics and statistical issues by educating users and other stakeholders.

3. All staff involved in the production of National Statistics will, as appropriate:

- a) act with integrity and be open, impartial and objective;
- b) comply with the *National Statistics Code of Practice* and its supporting Protocols, promote their principles and standards, and encourage their adoption among all colleagues who handle official statistics;
- c) comply with relevant legislation, such as the Data Protection and Freedom of Information Acts;

- d) participate in training and personal development activities necessary to maintain and develop relevant statistical, technical and managerial competences;
- e) maintain awareness of relevant statistical, technical and managerial developments and their costs and benefits;
- f) be committed to sharing good practice across the GSS;
- g) collaborate with colleagues and make use of their expertise.

A guide to putting the principles into practice

1. National Statistician

The National Statistician has overall responsibility for setting standards for the professional competence of the Government Statistical Service and others working on National Statistics.

2. Heads of Profession

Heads of Profession and Chief Statisticians in the devolved administrations are responsible for the professional competence of all staff working on statistics within their department, and for the development of their people to meet future needs. In this, they are expected to balance the need to meet current objectives with investment for the future. They will take the lead in implementing the GSS Human Resources Strategy.

3. GSS Heads of Profession Committee

The National Statistician meets regularly with the Heads of Profession to shape GSS and National Statistics strategy, approve policies and set in train programmes of work to develop the GSS and those products designated as National Statistics.

4. GSS Human Resources Committee

- a) The GSS Human Resources Committee (GSS HRC) acting on behalf of the Heads of Profession Committee will take the lead in developing the GSS Human Resources Strategy, including recruitment, development and retention of sufficient numbers of people to meet current and future needs. This Committee will also support and monitor implementation.

- b) Each year, the National Statistician and the Heads of Profession Committee will agree a programme of work for the Human Resources Committee to develop and review the Human Resources Strategy. This will take into account current issues, and any comments received from the Statistics Commission and the users of National Statistics. The programme of work will be made available on the National Statistics website.
- c) GSS Human Resources will be supported in its role by the GSS Recruitment and Development team, a centralised unit reporting to the National Statistician. The unit will support the annual GSS HRC work plan projects (including development of the GSS People Strategy), organise competitions to recruit professional statistical staff for the entire GSS, as well as managing induction training, continuing professional development activities, and career management advice.

5. The Statistician Competence Framework

- a) The Statistician Competence Framework which applies up to main grade level aims to improve consistency of approach across the GSS. It allows managers to set the requirements of a post in a GSS or National Statistics context, and to judge when people are suitable to meet these requirements.
- b) The Competence Framework works alongside departmental performance systems.
- c) The Competence Framework provides guidance to individuals and their managers about how they should develop. It will be the basis for managers and Heads of Profession to gauge overall statistical capacity, especially in a planning context.

6. Recruitment and promotion – standards and practices

- a) The GSS will aim to operate policies which encourage diversity and provide equal opportunities. It will support and encourage mobility across the different parts of the service, helping to transfer knowledge, expertise and best practice, and allowing staff to develop wider experience and skills. The use of the Statistician Competence Framework will help in this, by defining the requirements of a post in common terminology, and by giving a yardstick with which to judge competence to fill the post, regardless of background.
- b) For recruitment, the GSS operates within the Civil Service Commission's rules of fair and open competition. External recruitment to the professional cadre is organised through the Civil Service Selection Board (for the Fast Stream) and a standard GSS scheme (for Statistical Officers). Internal recruitment to the professional cadre is organised by individual departments using the standards of the GSS scheme. Recruitment for other positions is usually through departmental schemes.
- c) For promotion to professional analytical posts at main grade level, and unless local circumstances dictate otherwise, a senior professional member of the GSS from another department will normally be part of the promotion board to ensure that standards in professional statistical competence are maintained.

7. Induction, training and development

All members of the GSS and others involved in the production of National Statistics work in organisations that have the Investors in People (IiP) standard, or are working towards it. Many of the responsibilities which this *Protocol* vests in Heads of Profession, managers and staff are in line with the IiP principles of commitment, planning, action and evaluation. Most departments operate performance management systems which support good IiP practices, such as regular performance appraisal, identification of development needs, and personal development and training plans.

- 8. Continuing professional development and the role of professional bodies**
- a) The GSS expects, encourages and will support people to take a wider interest in statistics and to enhance their skills by study, training and practice. This includes:
 - i. encouraging staff to join the Royal Statistical Society or other relevant learned/academic societies;
 - ii. maintaining and extending knowledge and understanding of statistics or other relevant speciality by further study;
 - iii. gaining recognised academic qualifications, such as the MSc in Official Statistics, and professional qualifications, such as Chartered Statistician status.
 - b) Staff in the GSS are also expected to keep abreast of relevant legislation, such as the Data Protection Act, Freedom of Information Act and the Human Rights Act. Many of the data handled are personal and confidentiality must be ensured – a requirement set out in the *Protocol on Data Access and Confidentiality*.

References

Civil Service Management Code:

www.cabinet-office.gov.uk/civilservice/managementcode/csmc.pdf

Royal Statistical Society Code of Conduct:

www.rss.org.uk/about/conduct.html

Investors in People Standard:

www.iipuk.co.uk/IIP/Internet/InvestorsinPeople/TheStandard/Default.htm

Framework for National Statistics

www.statistics.gov.uk/about_ns/downloads/FrameDoc1.pdf

National Statistics Code of Practice – Statement of Principles

www.statistics.gov.uk/about_ns/cop/downloads/StatementRD.pdf

The Government Statistical Service – Our Vision – Becoming World Class*

The Government Statistical Service – Responsibilities of Heads of Profession for Statistics *

* Pamphlets are available from the GSS Recruitment and Development Team in the Office for National Statistics – Tel: 020 7533 6336

The GSS Statistician Competence Framework

The aim

This competence framework aims to improve consistency of approach across the Government Statistical Service (GSS). It will allow managers to set the requirements of a post in a GSS context, and to judge when people are suitable to meet these requirements. It provides guidance to individuals and their managers about how they should develop. It provides a basis for managers to gauge overall statistical capacity especially in a planning context.

The content

The range of statistical posts available across the GSS, from those which need general statistical service delivery skills to others requiring subject area or methodological expertise, makes it impossible to produce competences detailed enough to cover every eventuality. Instead, this framework shows the core areas of knowledge and expertise expected of statistical staff working in the GSS. It has been deliberately kept short and simple.

What the framework does not cover

The framework does not incorporate the general competences expected of civil servants, such as working with others, managing work and personal effectiveness, which are covered generally by departmental competence frameworks. To become fully effective, members of the GSS will have to acquire both the general civil service competences and the core statistical competences. Wherever possible, this framework should be integrated into departmental competence frameworks, and performance and pay systems.

The framework shows what would be expected of people at three levels:

- Level 1: After about a year in post at start of career (assistant statistician or statistical officer (EO), or equivalent)
- Level 2: After a few years' experience, with some project or team management responsibilities (assistant statistician after probation or statistical officer (HEO) or equivalent)
- Level 3: As a main grade statistician (Grade 7 or equivalent)

Five principles of working as a government statistician underpin these competences:

- Understand customers' requirements and the policy context in which they operate
- Provide objective and relevant statistical advice
- Be creative and flexible in your problem-solving – try to see the bigger picture
- Provide quality management of data, processes and products
- Be proactive and influence customers and colleagues

Using the GSS network

Finally, the GSS has a wealth of expertise and many methodological experts who can give advice and support. Members of the GSS are encouraged to use this network to assure and improve the quality of their processes and products, and to aid their own professional development.

Collection of data to meet customer requirements

	Level 1	Level 2	Level 3
Knowledge about sources	<ul style="list-style-type: none"> • Is aware of data sources directly relevant to own work or subject area • Understands that using administrative systems to produce statistics will have implications for the definitions and quality of data 	<ul style="list-style-type: none"> • Has detailed knowledge of data sources in their work area and working knowledge of other data sources in related areas • Has awareness of wider range of sources 	<ul style="list-style-type: none"> • Has detailed knowledge of data sources across departments/work areas and working knowledge of other data sources • Can locate data in a range of published and unpublished sources
Identifying data fit for purpose	<ul style="list-style-type: none"> • Identifies strengths and limitations of data sources they use 	<ul style="list-style-type: none"> • Can identify and assess suitability of other data sources 	<ul style="list-style-type: none"> • Manages the acquisition of data fit for purpose • Selects the right data for the purpose at hand and evaluates their strength • Finds out what else has been done in the same field
Surveys and data collection	<ul style="list-style-type: none"> • Understands principles of sample and survey design and collection methods • Understands sampling errors and issues such as non-response 	<ul style="list-style-type: none"> • Can develop or design or manage surveys and data collection 	<ul style="list-style-type: none"> • Can project manage all aspects of survey process • Can develop new uses of existing sources and maximise the statistical potential of new sources
Data quality and management	<ul style="list-style-type: none"> • Understands different methods of data storage, validation and extraction • Applies these to own data • Uses relevant software effectively 	<ul style="list-style-type: none"> • Can assess most appropriate way to store data • Can specify complex validation routines • Can carry out complex data manipulation • Has knowledge of wider range of software 	<ul style="list-style-type: none"> • Can implement National Statistics Data Quality measures • Brings expertise and innovation to data management issues • Is aware of potential links with other data sources • Involves IT specialists in developing and marketing new services

Analysis and interpretation to meet customer requirements

	Level 1	Level 2	Level 3
Technical awareness and application	<ul style="list-style-type: none"> Understands application of main statistical techniques and software used in their area Understands a range of statistical techniques 	<ul style="list-style-type: none"> Understands how to apply statistical techniques, and their underlying assumptions and limitations 	<ul style="list-style-type: none"> Has broad appreciation of statistical techniques and their application (including relevant software) Can assess the potential of emerging technology
Provision of data and research fit for purpose	<ul style="list-style-type: none"> Understands customers' requirements and relates this to information readily available in own area Can produce appropriate analysis to meet customers' requirements Can produce summary statistics (eg means, standard errors and indices) which describe data, allowing where necessary for extreme values 	<ul style="list-style-type: none"> Can suggest or recommend the most suitable sources, analyses and research 	<ul style="list-style-type: none"> Applies an innovative approach to meeting customers' requirements Proactively identifies customers' requirements including taking account of broader context Distinguishes the limits of applications of statistical findings
Awareness of context	<ul style="list-style-type: none"> Understands the policy making process and the role that statistical staff can play Is aware of the policy and subject issues in own area 	<ul style="list-style-type: none"> Is aware of the potential contribution of other analytical groups and the skills and techniques at their disposal 	<ul style="list-style-type: none"> Takes active steps to keep in touch with current policy and subject issues, and their impact on information needs and use
Interpretation	<ul style="list-style-type: none"> Can draw out the main messages from data, analysis and research, and identify essential supporting information Can use appropriate techniques Can identify irregularities and discrepancies in data 	<ul style="list-style-type: none"> Knows when to investigate outputs further and offers explanations Validates analyses against external sources and research 	<ul style="list-style-type: none"> Identifies the wider implications of the statistics produced Draws sound inferences from data, spotting weaknesses in the evidence or analysis, and exploiting weak information successfully

Dissemination

	Level 1	Level 2	Level 3
Explaining statistical concepts and findings	<ul style="list-style-type: none"> • Can communicate clearly (orally – one to one or in small groups – and in writing) simple or familiar concepts or own work • Is aware of need to tailor communication to audience 	<ul style="list-style-type: none"> • Can present own work or give joint presentations covering work of team to bigger groups or wider ranges, including more senior people 	<ul style="list-style-type: none"> • Can communicate appropriately to all levels of audience – ministers, press conferences • Explains clearly statistical concepts and findings to non-specialists • Chooses the most effective means of delivery and appropriate verbal and graphical content
Disclosure and confidentiality (Data Protection Act; Open Government; Freedom of Information; Release Practices)	<ul style="list-style-type: none"> • Understands basic concepts • Is aware of implications for own data and subject area 	<ul style="list-style-type: none"> • Knows the practical implications for own data and other data used 	<ul style="list-style-type: none"> • Is aware of legal and ethical aspects of data collection • Keeps abreast of developments • Influences and negotiates with interested parties • Can produce innovative solutions to satisfy confidentiality and Data Protection requirements
Means of effective and appropriate presentation (plain figures and media)	<ul style="list-style-type: none"> • Knows how to design charts and graphs • Is aware of guidance and good practice • Can draft simple reports • Can present statistics in tables and charts to help users to understand and use their statistics. 	<ul style="list-style-type: none"> • Can draft articles and reports choosing the most effective structure and commentary 	<ul style="list-style-type: none"> • Can exploit full range of media options • Contributes to draft articles and reports taking account of wider context

Professional Issues

	Level 1	Level 2	Level 3
National Statistics	<ul style="list-style-type: none"> • Is familiar with the National Statistics Code of Practice and Protocols • Understands how National Statistics initiative impacts on their area 	<ul style="list-style-type: none"> • Participates in National Statistics reviews and is familiar with concepts 	<ul style="list-style-type: none"> • Understands the National Statistics context and processes • Ensures compliance with Code of Practice in their area and can defend and uphold it as necessary
Wider professional awareness	<ul style="list-style-type: none"> • Takes steps to be aware of professional issues in own department (such as participating in departmental AS/StO Group) • Knows the structure of the GSS and its relationship with departments 	<ul style="list-style-type: none"> • Keeps abreast of developments in own and other departments, and the wider profession through networks, conferences and other meetings 	<ul style="list-style-type: none"> • Contributes to national and international development of statistics and statistical methods where appropriate • Communicates effectively with other members of the GSS and profession at large
Continuing professional development	<ul style="list-style-type: none"> • Identifies gaps in knowledge • Keeps knowledge up to date and expands range 		
Promoting a statistical approach and the correct use of statistics	<ul style="list-style-type: none"> • Understands the role of statisticians in government and their own role in their department 	<ul style="list-style-type: none"> • Takes opportunities to promote the use of statistics • Develops statistical skills of colleagues 	<ul style="list-style-type: none"> • Promotes the use of statistics and the role of statisticians to policy colleagues and other professional groups

