The Role of Science and Engineering in the Civil Service

Scientists and engineers in the Civil Service (currently around 12,000 in number) are critical to ensuring that government decisions and activities are informed by a high quality, integrated and transparent evidence base.

Government scientists and engineers see their careers, learning and development anchored around science and engineering work. They seek to achieve the level of competence, behaviour and status that goes with being professional in this work. Like all civil servants, scientists and engineers share a common set of transferable behavioural skills set out in the Civil Service Competency Framework (CSCF). As with all expert professions, some roles require professional knowledge, skills and experience in science and engineering and these are set out in the Science and Engineering Skills framework.

Introduction to the Science and Engineering Professional Framework

This document represents the professional skills framework for the Science and Engineering profession in the Civil Service. It outlines the job-related professional expertise that scientists and engineers may be expected to have at the following levels:

Level 5 and above – Senior Civil Service Pay Bands
Level 4 – Grade 7 and Grade 6 or equivalent
Level 3 – Higher Executive Officer (HEO) and Senior Executive Officer (SEO) or equivalent
Level 2 – Executive Officer (EO) or equivalent
Level 1 – Administrative Assistant (AA) and Administrative Officer (AO) or equivalent

The professional framework should be read in conjunction with competencies in the Civil Service Competency Framework. You should note that there are a number of additional science and engineering specific indicators listed under the core competency headings, that you may wish to consider.

Who is the Framework for?

This framework is aimed at staff working in science or engineering posts and their managers. This usually encompasses posts where professional qualifications and experience are directly relevant to the work being undertaken. It also provides a common framework under which staff can describe the skills they have gained in a science and engineering role.

It is designed to be a tool to be used alongside the CSCF where it is relevant. This may be as part of:

- Performance Management
- Development
- Recruitment

There is no expectation that science and engineering roles will use all of the additional competencies listed in the framework. Line managers and staff should consider the requirements of an individual role and select the indicators that are most appropriate to that role. It is not expected that all indicators in a given competency will apply.

Some organisations will also have specific professional development cadres; you will need to refer to local guidance where this is the case and use the Science and Engineering Skills Framework appropriately.

You should also refer to local guidance from your organisation's Head of Science and Engineering Profession (HoSEP) or HR section and the standards (such as professional qualifications) set by professional bodies in the relevant discipline.

Information about science and engineering professional bodies is available from:

Engineering Council: www.engc.org.uk
Science Council: www.sciencecouncil.org

Some roles may require a minimum depth of knowledge or experience to be able to operate effectively; this may include holding an appropriate level of subject qualification. Depth of expertise is not necessarily grade dependent. Some roles may require people to be effective at a higher level of the professional competency than their current grade in order to deliver their duties successfully.

The framework is also relevant to staff who consider science or engineering to be their career 'anchor' and wish to pursue a career in the Civil Service working on science, engineering or technology issues or working closely with scientists and engineers.

You may also consider using this tool for talent management, workforce planning, training needs analysis and organisational capability assessments.

Producing Local Guidance

In producing local guidance it is expected that HoSEPs and HR sections will modify the examples as appropriate. For ease of reference a high level description of each competency is provided. HoSEPs and HR sections may choose to include these descriptors in local guidance but verbatim duplication of this text is not required. It is, however, essential that any local guidance fully reflects the context and spirit of this text.

Using the Science and Engineering Professional Framework

Recruitment

Recruiting managers should consider whether science and engineering skills are essential to a vacancy. If you consider they are, you should select competencies from both the CSCF and the science and engineering framework. You should refer to your organisation's local guidance on best practise in recruitment when selecting how many professional competencies to use.

You should then proceed to advertise, sift, interview, appoint and induct as per your organisation's guidance.

Those with a science and engineering background at all levels are encouraged to register with Government Science and Engineering (GSE, gse@bis.gsi.gov.uk) to keep abreast of relevant science and engineering activity in other organisations.

Performance Management

As a first step, line managers and staff should establish and agree whether science and engineering knowledge and skills are needed for the post, above and beyond the CSCF competencies.

Should you decide this is the case, then you should proceed to set objectives using your organisation's performance management guidance using both the CSCF and the Science and Engineering Professional Framework.

Development

You should consider what further science and engineering skills you need to develop to achieve your current objectives and what you would like to develop as part of your CPD in your career. This should take place as part of the performance management process.

You should discuss appropriate learning and development opportunities with your line manager and agree appropriate development objectives. You should then proceed to review your learning and development as per your organisation's guidance.