

Accreditation for geospatial professionals

**Royal
Geographical
Society**
with IBG

Advancing geography
and geographical learning



Royal Geographical Society (with IBG)

Produced in collaboration with the Royal Institute of Chartered Surveyors, Chartered Institution of Civil Engineering Surveyors, Association for Geographic Information, Chartered Institute for IT and Institution of Royal Engineers

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Introduction

Location data has the potential to generate significant economic, social and environmental value globally through widespread adoption. In the UK, the estimated value of the geospatial data market is £15 billion¹, which includes the contribution that geospatial makes within the broader digital technology market.

Key to unlocking this value are skilled professionals who come from a wide range of backgrounds and work across many sectors. Analysis of recently advertised geospatial roles² reveals distinct clusters of occupations within the geospatial landscape, with associated skills, knowledge and experience.

There is no one-size-fits-all professional journey, nor one prescribed pathway for professional development and accreditation for geospatial professionals. This short guide provides an introduction to professional recognition across different domains, with information on pathways. It has been produced collaboratively by some of the key professional bodies involved. We welcome suggestions for additions. More information is available online.

“Data skills and digital capabilities are becoming an increasingly important aspect of jobs across the economy.

Geospatial skills are an important aspect of this. The importance of data literacy in general and geospatial skills in particular will continue to increase in importance as more data is collected and made available and open source tools become more prevalent.”²



- 1 Geospatial Commission (2020) *Enhancing the UK's Geospatial Ecosystem*. London, UK: Geospatial Commission. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1032440/Enhancing_the_UK_s_Geospatial_Ecosystem.pdf
- 2 Frontier Economics (2020) *Demand for geospatial skills. Report for the Geospatial Commission*. London, UK: Geospatial Commission. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1073139/_Demand_for_Geospatial_Skills_report_.pdf

The geospatial landscape

Geospatial professionals have a wide range of backgrounds and work across many sectors. The UK geospatial strategy *Unlocking the power of location*³ describes the breadth of these sectors and thematic areas, as represented in Figure 1.

Nine location data opportunities

Infrastructure

Transport

Housing

Environment

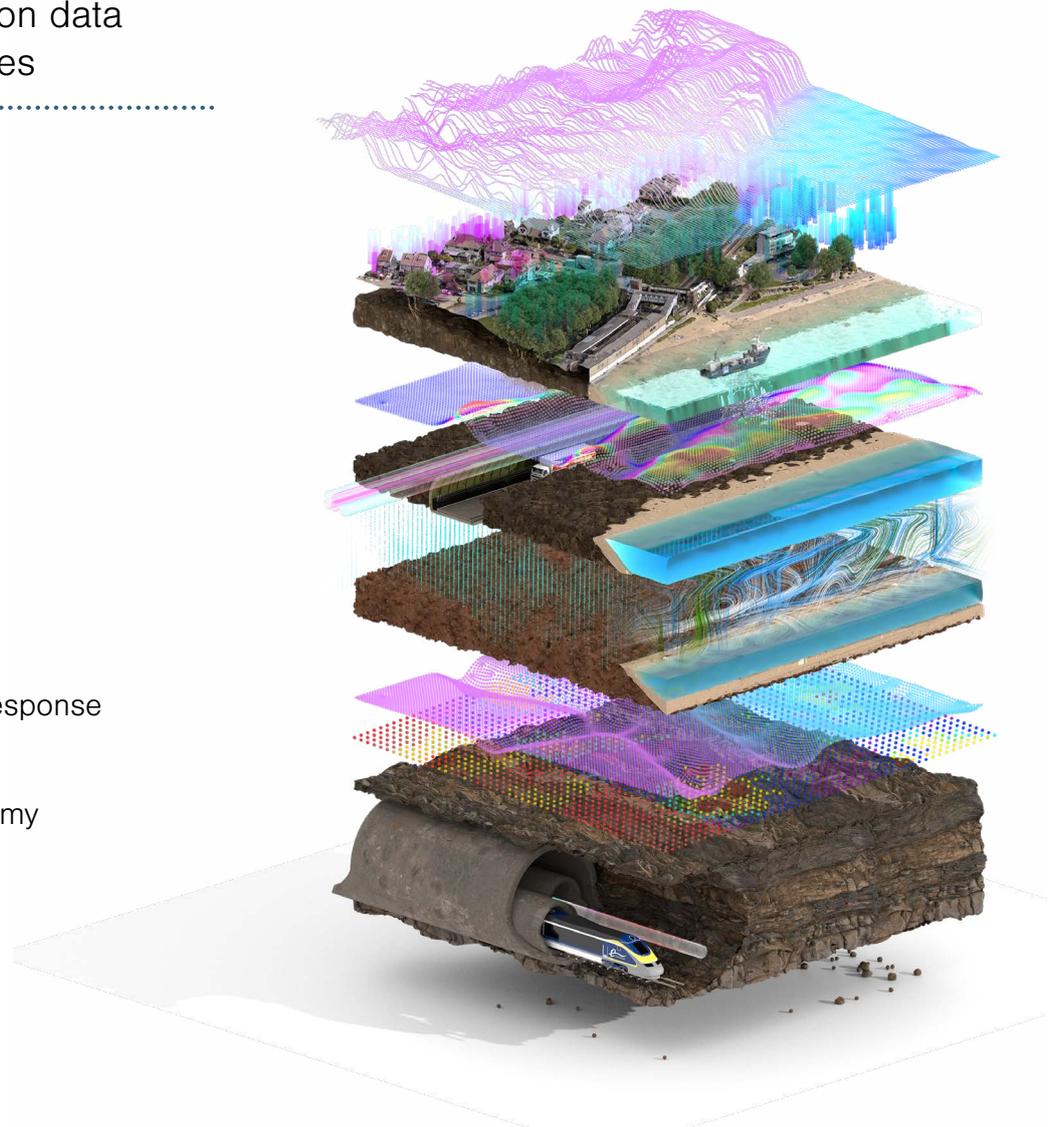
Public health

Emergency response

Ocean economy

Retail

Finance



▲ Figure 1. The opportunities that geospatial professionals work across (as described by the report *Unlocking the power of location. The UK's Geospatial Strategy, 2020 to 2025*³), showing the diversity of sectors. © Geospatial Commission

3 Geospatial Commission (2020) *Unlocking the power of location. The UK's Geospatial Strategy, 2020 to 2025*. London, UK: Geospatial Commission. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/894755/Geospatial_Strategy.pdf

The Geospatial Commission report, *Demand for geospatial skills*², describes clusters of occupations within the geospatial landscape which are helpful in describing and classifying the range of geospatial roles based on the skills and expertise required. Figure 2 summarises the six groups.

Full analysis of these roles can be found in the report. However, as a summary:

- **GIS specialist** roles specify GIS skills, including ArcGIS or QGIS, plus general skills in areas such as communication or the use of common programmes like Microsoft Excel.
- **Data management and software development with GIS** specialists require GIS skills, along with database administration skills such as SQL and/or data programming, for example use of programming languages like Python or Java.
- **Civil engineering** specialists require building information modelling (BIM) knowledge and capability, as well as skills in engineering and drafting software packages such as autoCAD and Revit.
- **Simultaneous Localisation and Mapping (SLAM)** technology involves the use of cameras

and/or sensors to capture 3D measurements to generate maps. Non-geospatial skills of this group include a high prevalence of coding capability such as C++, machine learning and Python skills.

- **Surveyors** and occupations with related expertise require skills related to field surveys and topographic surveys.
- The **miscellaneous** category contains a wide variety of skill requirements. This includes generic mapping capability, logistics analysis, and Earth observation skills such as imaging and remote sensing. This category can also contain hydrographic survey (marine geospatial) skills.

Broadly, these groups can then be mapped against professional bodies and pathways, noting that for some people there will be an overlap in their expertise. The accreditation landscape reflects this, allowing professionals to follow the pathway which best suits their specialisms within the geospatial industry and to combine specialisms.

▼ Figure 2. Clusters of occupations within the geospatial landscape, as described by the *Demand for geospatial skills*² report.



The professional body landscape

The table below shows the six occupational groups within the geospatial landscape and the relevance of selected professional bodies for these areas of work. The organisations covered by this guide are the Royal Geographical Society (with IBG) (RGS-IBG), the Royal Institute of Chartered

Surveyors (RICS), the Chartered Institution of Civil Engineering Surveyors (CICES), the Association for Geographic Information (AGI), the Chartered Institute for IT (BCS) and the Institution of Royal Engineers (InstRE). We welcome suggestions for further additions to this guide.

	GIS specialists	Programming/ data management with GIS	Civil engineering	SLAM and robotics	Surveyors	Miscellaneous
RGS-IBG	●●	●	●		●	●●
RICS	●	●	●		●●	●●
CICES	●	●	●●	●	●●	●
BCS		●●		●●		
InstRE	●	●	●●			

The AGI are an independent membership body who collaborate with the listed professional bodies, supporting members with CPD and accreditation.

●● strong involvement/core remit; ● moderate involvement; ● limited involvement



Benefits of professional accreditation

Professional accreditation demonstrates competence, experience and professionalism. It provides support to structure personal development and learning, keeps individuals abreast of developments within the profession, and provides opportunities for networking. It enhances career profiles, increases earning potential, and demonstrates significant and ongoing personal development and commitment to the highest professional and ethical standards. It also offers a professional network, as well as external development opportunities and platforms for thought leadership. For some, professional accreditation is a step on the ladder for career progression.

However, accreditation doesn't just benefit individuals. Businesses also benefit from accreditation, through external recognition of the professional standing of employees and their competence, skills and knowledge. Employee satisfaction increases when an employer invests in employee learning, development and career progression – and accreditation does just that!

Professional accreditation also enhances client confidence in the abilities of an individual or firm to deliver on time and to the agreed quality and budget.



Royal Geographical Society (with IBG)

Royal Geographical Society

with IBG

Advancing geography
and geographical learning

14,000
members

Five
professional
accreditations

About	The UK's learned society and professional body for geography.
Approximate number of members	14,000 members across a mix of membership grades, including 10,500 Fellows and 900 early career professionals
Licensed to award	<ul style="list-style-type: none"> Fellow of Royal Geographical Society (FRGS) Chartered Geographer (CGeog) Chartered Geographer Geomorphology (CGeog Geomorph) Chartered Geographer Economics (CGeog Economics) Chartered Geographer GI Science/Geographic Information (CGeog GIS/GI) Chartered Geographer Teacher (CGeog Teach)
Grades of membership	<ul style="list-style-type: none"> Membership Student membership Associate Fellow Fellowship Chartered Geographer
Specialist interest groups	<ul style="list-style-type: none"> www.rgs.org/professionals/professional-practice-groups www.rgs.org/research/research-groups
Contact details	<ul style="list-style-type: none"> www.rgs.org professional@rgs.org linkedin.com/showcase/chartered-geographer-cgeog

Royal Institution of Chartered Surveyors



134,000
members

Four
professional
accreditations

About	Professional body for land, property and construction surveying activities, focusing on professional standards and training and qualifications in the development and management of land, real estate, construction and infrastructure.
Approximate number of members	134,000 trainees and professionals, of which around 85% are within the UK, and a geospatial professional group with 2,450 members
Licensed to award	Chartered Land Surveyor Chartered Hydrographic Surveyor Chartered Engineering Surveyor Chartered Surveyor
Grades of membership	Associate Member (AssocRICS) (technical) Chartered Member (MRICS) Fellow (FRICS)
Specialist interest groups	www.rics.org/networking/rics-communities/professional-groups
Continuing Professional Development (CPD)	20 hours required per year, full range of free-to-access CPD and paid for content
Contact details	<p>W www.rics.org</p> <p>E contactrics@rics.org</p>

Chartered Institute for IT



60,000
members

Six
professional
accreditations

About

Committed to making IT good for society. The Institute sets standards for IT professionals and uses the powers of its networks to bring about positive, tangible change.

With the spotlight increasingly on IT professionals, the Institute provides a trusted, powerful and positive reference point for the IT sector within wider society. Members include individuals working across all industries and businesses where information technology is playing an increasing role.

Approximate number of members

60,000 members in 150 countries

Licensed to award

- Data Science Professional
- Advanced Data Science Professional

Chartered Professional Registrations:

- Chartered IT Professional (CITP)
- Registration for IT Technicians (RITTech)
- Engineering Council registration
- Registration for Informatics Professionals in Health and Social Care (FEDIP)

Grades of membership

Student
Associate (AMBCS)
Professional (MBCS)
Fellow (FBCS)

Specialist interest groups

www.bcs.org/membership-and-registrations/member-communities

Continuing Professional Development (CPD)

www.bcs.org/it-careers/continuing-professional-development-cpd

Contact details

www.bcs.org/contact-us

Chartered Institution of Civil Engineering Surveyors



5,000
members

Three
professional
accreditations

About

The leading international professional body for specialists in geospatial engineering and commercial management in infrastructure.

Specialisms include geospatial engineering (land surveying, engineering surveying, hydrospatial, photogrammetry and remote sensing, GIS, geospatial information management, and utilities and sub-surface mapping) and commercial management (quantity surveying, estimating, cost engineering, project management, procurement engineering, construction law, and planning).

Approximate number of members

5,000 members at various professional and entry level grades

Licensed to award

Chartered Engineer
Incorporated Engineer
Engineering Technician

Grades of membership

Entry level grades:

- Student
- Affiliate
- Graduate
- Associate Member (apprenticeship)

Professional grades:

- Technical Member
- Member
- Fellow

Engineering Council grades:

- CEng
- IEng
- EngTech

Specialist interest groups

www.cices.org/committees

Continuing Professional Development (CPD)

www.cices.org/cpd

Contact details

 www.cices.org/contact

Institution of Royal Engineers



Institution of
Royal Engineers

12,000
members

Six
professional
accreditations

About

A learned society that seeks to advance the art and science of military engineering by sharing experiences, best practice and emerging thinking. The InstRE is open to applications from serving members, veterans and civilians, and is a registered charity incorporated by Royal Charter, established in 1887.

Approximate number of members

12,000 members, including 2,000 professionally accredited members

Licensed to award

Engineering Technician (EngTech)
Incorporated Engineer (IEng)
Chartered Engineer (CEng)

Grades of membership

Member
Fellow

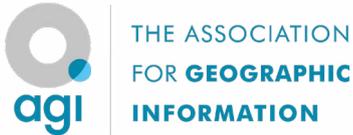
Specialist interest groups

Royal Engineer Sustainability Forum: www.instre.org/knowledge-centre/climate-change
The Royal Engineers Museum: www.re-museum.co.uk
Royal Engineers Historic Society: www.instre.org/rehs/rehs-about-us

Contact details

W www.instre.org
E registration@instre.org

Association for Geographic Information



Three
membership
grades

Regional and
specialist
interest groups

About	Membership body which seeks to lead, connect and develop a community of individual and corporate members who use and benefit from geographic information.
Licensed to award	As a representation body, no accreditations are awarded
Grades of membership	Individual professional membership Associate organisation membership Partner organisation membership
Specialist interest groups	AGI Cymru AGI Scotland AGI Northern Ireland AGI Early Careers Network AGI Gemini working group AGI Education and skills working group
Contact details	www.agi.org.uk

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