

# AGI Skills Roundtable

Geocom 2023



THE ASSOCIATION  
FOR **GEOGRAPHIC**  
**INFORMATION**





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**Environmental Statement;**

by producing this report in a digital only format, with additional detail online, we are aiming to minimise, our environmental impact.



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# About the AGI

The Association for Geographic Information (AGI) is the UK's geospatial membership organisation; leading, connecting and developing a community of members who use and benefit from geographic information.

An independent and impartial organisation representing the UK geospatial sector, the AGI works with members and the wider community alongside government policy makers, delivers professional development and provides a lead for best practice across the industry.

The Association's mission is to nurture, create and support a thriving UK Geospatial Community, actively supporting a sustainable future and it aims to achieve this through the three pillars that govern its activities and intentions;

- nurture and connect active GI communities
- support career and skills development for GI Professionals
- provide thought leadership to inspire future generations

Established in 1989, members of the AGI enjoy unrivalled networking opportunities, a framework to learn new skills and the support to progress professional development and there are many ways to get involved and different levels of engagement;

## Individual Network Member

free membership for anyone

## Individual Professional Member

paid membership for individuals providing additional career, networking and business development benefits

## Organisational Associate Member

membership for organisations that includes professional membership for employees and promotional benefits

## Organisational Partner Member

premium membership for organisations that includes thought leadership, professional membership, promotions, sponsorship and additional benefits

For further information about membership levels, commitments and benefits visit [www.agi.org.uk/membership-levels/](http://www.agi.org.uk/membership-levels/)

# Education & Skills Working Group

The AGI's Education and Skills Working Group contributes to ensuring the relevant skills exist in the UK workforce to underpin a thriving GI sector. It carries out an annual skills survey to identify issues and trends in recruiting, retaining and developing talent, and is leading the creation of a catalogue of geospatial skills providers in the UK.

The first of these surveys was undertaken in 2022, with the results published in 2023 (<https://www.agi.org.uk/skills-survey/>). This report included a summary of the results which reported that the survey received responses from 131 organisations based across the UK; 12% of the AGI membership. There was an even split of responses from the public (55%) and private (45%) sectors, and the majority of respondents were from large organisations (64%).

Headline results from the survey were as follows;

## Recruitment

- 79% of organisations had recruited in the last 6 months, with more new roles being created in the private sector and more backfilling in the public sector.
- 63% of organisations are recruiting because they were experiencing higher demand for geospatial skills in their business.
- 69% of organisations are able to recruit for the geospatial skills they require. The private sector finds it easier to recruit than the public sector.
- 77% of organisations expect to be able to recruit in the future. The private sector is more confident about recruitment than the public sector.
- 46% of organisations who are hiring say that pay is a barrier to recruitment.



## Skills



The skills in highest demand are core data skills – analysis, processing, visualisation, manipulation.



The skills in lowest demand are less data-related skills like ethics, people management, and business analysis.



## Retention



The majority (63%) of organisations are able to retain, 33% are partly able to retain, and only 5% unable to retain.



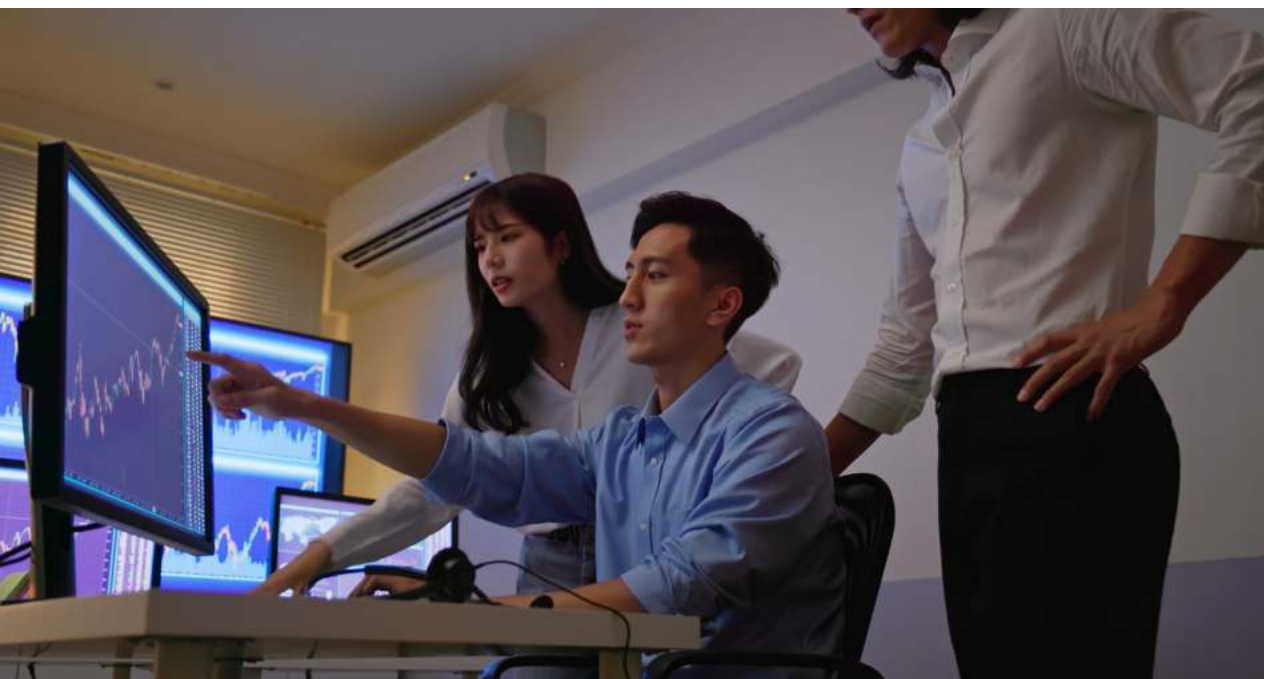
Reasons for good retention include a good company culture (39%) and good career progression opportunities (21%).



The majority (71%) of organisations provide development opportunities.



Two third (65%) of organisations with recruitment challenges say that pay is a barrier to retention.







## Skills Roundtable - Introduction

In December 2023 the AGI hosted a roundtable event to convene a wide range of stakeholders from government, industry, academia and professional competency bodies to discuss the future of skills within the sector. With the UK ranked as second in the [global geospatial readiness index](#) and with dedicated geospatial companies in the UK generating over £6 billion in annual turnover, providing employment for over 30,000 people, and securing over £1 billion in equity investment since 2016, discussions were based around the findings of the AGI Skills Survey Report.

Attended by representatives from organisations such as the Geospatial Commission, Government Geography Profession, Royal Geographical Society (with the Institute of British Geographers), Chartered Institution of Civil Engineering Surveyors, Royal Institution of Chartered Surveyors, University College London, Ordnance Survey, Esri UK and Leica Geosystems, the meeting was chaired by Dr Vanessa Lawrence, a former Chair of the AGI and international business professional with nearly forty years' experience in the geospatial sector.



*This meeting, together with the wider GeoCom event, provided an invaluable opportunity to receive feedback from some of the most influential organisations operating within the geospatial sector. The discussions demonstrated a passion to share the value of geospatial which underpins every aspect of our daily lives; from ensuring the supply of essential services, helping goods reach their destination, monitoring environmental issues and enabling emergency services to respond efficiently. Geospatial is a 'purpose-led' profession and being a professional working within it, we have the ability to make a difference to others' lives, every day.*

*"However, there was also a recognition that continual action is required. Like other professions we need to attract and retain high calibre candidates at all stages of the career journey and this requires training and skills development to be easily available. The AGI skills survey showed good progress has been made, but it acknowledged that this work must continue at pace to meet the growing demand required by this exciting, purpose-led profession*

Dr Vanessa Lawrence, CB



## Skills Roundtable – Overview

Present at the AGI Skills Roundtable Meeting were invited representatives from government, industry, academia and professional competency organisations. These included;

- Patricia Barlow, Head of Product, BCS The Chartered Institute for IT
- Emma Chown, Senior Consultant, Arcadis
- Faith Clark, Consultant, Association for Geographic Information (AGI)
- Joseph Dudley, Director, Space Skills Alliance
- Claire Ellul, Associate Professor, University College London
- Richard Flemmings, Director, Association for Geographic Information (AGI)
- Liz Fox-Tucker, Professional and Policy Manager, Royal Geographical Society (with IBG)
- David Henderson, Chief Geospatial Officer, Ordnance Survey
- Lauren Holland, Education Sector Manager, Leica Geosystems
- Katie Holt, Development Manager, Chartered Institution of Civil Engineering Surveyors
- Laura Isom, Talent Acquisition Manager, Esri UK
- James Kavanagh, Director, Royal Institution of Chartered Surveyors
- Vanessa Lawrence, Director, Location International
- Morgan Lloyd, Sales Director, GIS-Jobs
- Ian Maxfield, Director (Education and Skills Co-Chair), Association for Geographic Information (AGI)
- Damien McCloud, Director, Arup
- Helen McKenzie, Geospatial Advocate, CARTO
- Tom Perks, Co-Chair, Association for Geographic Information (AGI) Early Careers Network
- Rebecca Reid, Skills and Capability Policy Lead, Geospatial Commission
- Natalie Small, Geographic Analyst, Welsh Government
- Katherine Smyth, GIS Manager, Ordnance Survey of Northern Ireland
- David Wood, Head of Government Geography Profession, Government Geography Profession



The meeting was opened by Ian Maxfield, Director (Education and Skills Co-Chair) Association for Geographic Information (AGI) and Associate Director of Geospatial Services within the NHS. He outlined the results from the Skills Survey and explained the general consensus, prior to this exercise, had been one predicting a skills crisis. However, this had not been the case, and the market had reported a confidence in the availability of core skills, such as data manipulation, visualisation and processing. Nonetheless, he did urge caution and encouraged the discussion to perhaps focus on the nuance and details behind the headline results, asking the participants to consider what could be done to prevent a future skills shortage, how issues such as supply and demand can be addressed and the age-old problem of wages.

## Skills Roundtable – Discussion



Led by Dr Lawrence, the audience was asked if they felt, 12 months on, the results of the AGI Skills Survey were representative of their organisation and their experiences. Damain McCloud, Director of multinational professional services firm Arup, enforced the view that **for core skills there is no skill shortage**; they can attract applicants and they can satisfy wage expectations. However, he did urge caution citing the ‘wedding syndrome’ (additional pricing for day-to-day items when associated with a wedding) for roles that include in demand skills such as AI and suggested this could be addressed by developing these skills in-house.

Claire Ellul, Associate Professor at University College London which currently offers two MScs in Geospatial, enforced this view with anecdotal evidence of those with an interest in or skills relating to AI / ML being attracted to other sectors and industries where pay and recognition are possibly better. David Wood, Head of the Government Geography Profession, also suggested a **‘grow your own’** approach for the geospatial sector to develop and retain hard to attract skills linked to external qualifications, such as Masters courses, and Operational Delivery Professional support.



Helen McKenzie, Geospatial Advocate at Carto, developers of a leading Location Intelligence platform, explained that two years ago they had undertaken a similar exercise. She reported a difficulty in recruiting ‘data scientists’ with geo skills and once again suggested that teaching geo was more achievable than the other way round. She also suggested that geo in front of a job title results in a drop in salary and warned of a loss of skilled staff as technicians were promoted to managers.

Laura Isom, Talent Acquisition Manager at Esri UK, enforced the view from Arup that overall, it was fairly easy to recruit, if you were willing to ‘juggle’ what you were looking for. She cited a ‘passion’ for geo and a willingness to upskill as important factors and even went so far to suggest that the sector may need to drop ‘geo’ when looking for basic skills such as developers.

Morgan Lloyd, Sales Director at online recruiters GIS Jobs, echoed the common theme of salary as did Joseph Dudley, Director of the Space Skills Alliance. Dudley also built on the reoccurring theme of personal interest stating that if a candidate entered the profession because they liked problem solving, they were potential more likely to leave than a candidate that had a passion for space.

David Henderson, Chief Geospatial Officer at Ordnance Survey, recalled an experience where his organisation had launched ‘Geospatial Expert Forum’ attracting just 50. When rebranded as just a ‘Geospatial Forum’ 600 people registered. He proposed that one issue is ‘mid-career’ development and argued that **it is important to keep staff energised and enthused** as they moved from front-edge tech to the next stages of their career.

James Kavanagh, Director of the Royal Institution of Chartered Surveyors, contended that the use of geospatial was a broad church with specific skills sets ranging from hands-on technical abilities to application specific knowledge, and, in certain sectors such as the Land and Property services there was an enormous skills issue. He proposed that a move away from specific skills, focussing instead on conduct and behaviour issues was one solution. He also challenged organisations such as the AGI, ICES, RGS to work together towards a combined qualification.

The meeting Chair, Dr Lawrence, picked up on discussions regarding the dwindling opportunities within geospatial for formal education reciting her experience in Greece and Portugal where a Geospatial Engineer has the same professional standing as a medical Doctor. She also described her experience as Honorary Colonel of the 135 Geographic Squadron Royal Engineers where she works with tens of thousands of highly engaged young recruits.



Katherine Smyth, GIS Manager at OSNI, agreed with the general consensus that retention was a challenge. Candidates, once having gained proven outcomes, were increasingly attractive to other government organisations and private sector operations.

Rebecca Reid Skills and Capabilities Policy Lead at the Geospatial Commission, argued that an issue the sector is facing is a branding one. The language used should be more democratised in order to make positions understandable and therefore attractive – geospatial is special!

Helen McKenzie, Geospatial Advocate at CARTO, picked up on the democratic idea and marketing theme. They described experience of siloing skills, and therefore opportunities, and of potential candidates being 'switched-off' geospatial early in the education journey before they got to the 'sexy-stuff'.


Enforcing these themes, Dr Lawrence challenged the audience to recognise the value and understand what geospatial does and is capable of doing as a sector. She urged people to talk differently stating the language used now hasn't changed for 20 years and as a result geospatial is being squeezed out when it comes to talent attraction despite the fact that space needs geospatial, AI needs geospatial, etc., etc.

Patricia Barlow, Product Manager at BCS, the Chartered Institute for IT, admitted that, despite working within IT and wider digital profession, she had previously not heard of geospatial. She did then continue by outlining how the problems faced by the sector are not unique and are experienced across other areas such as health and finance. Representing the wider IT sector, she advocated that her members 'work with purpose' to influence outcomes in all sectors and that great people with great skills will do the right thing. Damien McCloud, embraced this enthusiasm adding digital transformation provide the biggest opportunities, and the biggest challenges, for the biggest careers.

Liz Fox-Tucker, Professional and Policy Manager at the Royal Geographical Society (with IBG), added her voice to those challenging the geospatial 'brand'; GIS is part of geography and should be taught in schools making geospatial jobs more attractive and more relevant at the pipeline stage. She felt that in addition to huge amount of attention required at the pre and early careers stages, mid-career professionals needed recognition, possibly through accreditation, to plug the leaky pipeline.

Richard Flemmings, Director of the AGI and CEO of tech-for-good company Map Impact, recounted his recent experience of trying to recruit a Senior Software Developer. Trying to compete with other sectors on salary he eventually appointed a candidate from the gaming sector who was looking for purpose during their mid-career. This segued into a discussion on Higher Level Apprenticeships with Damien McCloud describing the inclusion of a mid-career pivot into Level 7 apprentice-ships due to be launched this summer.





Emma Chown, Senior Consultant at Arcadis and Committee Member of the AGI's Early Careers Network, drew on feedback that had been extracted from the Group's own survey 'What do early careers professionals in the geospatial sector value from their employers?' presenting a case for in-house career nurturing and development backed up by flexible working and an attractive organisational structure.

Bringing the discussions to a conclusion, Dr Lawrence sustained the pervasiveness of geospatial within society should be matched by building a little bit of geospatial into different areas of education. She urged the collective to think laterally in order to expand the reach and spread the influence in order to achieve the purpose and outcome of geospatial. David Wood added his voice to this appeal warning that if, as a profession, geospatial continued to be viewed as 'stuck in the corner twiddling with maps' the opportunity to influence and set standards would be lost. Ian Maxfield, drawing on his experience within the NHS, proposed that the issues outlined were not limited to geospatial affecting all areas where professional analytical skills were required

Lauren Holland, Education Sector Manager at Leica Geosystems, providers of solutions for measurement and survey, also suggested that action was required. She cited examples of fewer undergraduate courses resulting in a lack of training within the land surveying sector and offered a solution where commercial organisations could 'adopt a college'.

Closing comments from around the table, guided by Dr Lawrence, focussed the discussion on a few specific threads;

- As a sector geospatial needs to define its **PURPOSE** and **OUTCOME**
- Whilst different messages are required to engage different audiences these messages need to be **UNIFIED**
- People inspire people, so geospatial professionals must be equipped with the skills to **COMMUNICATE**
- To preserve geospatial, opportunities for **LEARNING** and **DEVELOPMENT** must be available at all career stages
- Overall geospatial needs to be **ACTIVE** and **VIGILANT**

