

Model Professional Self Evaluation Private Sector (GIS)

In my current capacity as Principal Environmental Consultant for a principal civil engineering company, I have been very fortunate to find a position where the application of many of my geographical skills and interests can be combined in making a real contribution to the way our projects are managed and delivered. Now accountable for the control and future direction of GIS throughout UK operations, increased client-facing in the generation of larger environmental projects, and for the monitoring of quality assurance levels for work within my team, I am enjoying the chance to make an even greater impact.

I feel that it is the right time to formalise my professional status and would, therefore, like to take this opportunity to share the background of my career to date, the projects and experience that have guided me to this position and most importantly, the role that Geography as a discipline has played.

I read Geography BSc at University. This course provided a suitably broad grounding in both physical and human geography, but on graduating I felt I had not yet found the focus to commit myself to a particular stream of the discipline. A postgraduate qualification in GIS offered the perfect solution to marry my analytical nature with the more objective understanding of geographical processes as represented in a computing environment.

Spatial analysis and the nature of the relationships that objects share in a physical space (a concept so fundamental to GIS) were quickly realised as my particular areas of interest, and were developed further through a four month placement. This work provided the background to my MA thesis, in the production of spatial statistics and mapping to provide a vastly improved understanding of UK X market patterns.

Following the MA course, I was clearly in an improved position; now with a particular vocational skill and training in a suite of GIS software. I was aware of the vast array of potential applications for these tools and my direction was guided by the works of two academics (names removed) as I accepted a role as research assistant at the School of Geography (at a University). Our research projects included an analysis of a city's secondary care service utilisation relative to NHS resource allocation on behalf of a health care advisory group. This was a highly successful piece of work which highlighted disparities between the funding commitments of NHS trusts and the levels of patient uptake, and applied geodemographic information in attempt to explain the relationships that were discovered. An academic paper has since been published to document the adopted modelling approach (details included in CV).

In 2003 I moved abroad for 10 months and was entrusted by the School of Geography to continue work as a developer of teaching materials for online GIS Masters courses. Despite the obvious distraction of the physical environment, I was able to fulfil this role adeptly and enjoyed the opportunity to impart the knowledge that I had gained through my own education and the experience of GIS applications in my research.

The position of Environmental Consultant at a civil engineering company became available in August 2005 and represented a considerable challenge. At my time of joining the office there was little or no GIS capability, yet I realised that many of the projects and deliverables had the potential to incorporate the analysis tools and output options that GIS could offer. In order to establish a role I convinced many senior personnel that Geographical Information Systems were the way forward for accurate and efficient management of many tasks and have encouraged people to think spatially about their information at all levels. I have since introduced GIS functionality to a wide range of applications on major projects throughout our UK and Ireland offices, for many clients. I have established GIS as best practice for the coordination and interrogation of spatial information within the environment team, and GIS now offers significant input to much of our data analysis and reporting.

A major success has been the use of LIDAR elevation data in (government agency) projects for the study of past, and the prediction of future, flood events. The comparison of contours and digital elevation models from this data, with modelled water levels, now allows the Rivers and Coastal team to analyse magnitude of return periods and perform increasingly accurate economic appraisals. These methods were applied, for instance, in the study of the flooding in XXX in order to validate observed flooding evidence and plan for future defences. The results have been presented to a government agency and proposed for publication in a leading industry magazine.

Another invaluable application of GIS and spatial analysis at the company has been multi-criteria evaluation for site and route selection. In response to a request, my team devised a mechanism for incorporating a suite of weighted environmental constraints alongside a spatial element representing their location. This facilitated the successful scoring of route options for environmental impact assessment. In terms of efficiency and accuracy, this method offered substantial enhancement over traditional manual approaches. By hosting and processing such environmental features in one system and format, the relevant data was fed directly into reporting and an Environmental Statement.

In 2007 I was promoted to 'Principal Environmental Consultant' for the company and due to rapid expansion and growth in workload, I now have staff in other offices and plan to employ another GIS specialist. I have also worked to put in place a GIS email forum to which all staff can post GIS related queries. I continue to spread GIS awareness and understanding and have developed focussed training materials after assuming responsibility for GIS desktop software training for UK personnel. My aim for the future development of GIS business in the company is to progress our recognition to standalone GIS projects where we do not just assume a support role. Indeed, this is beginning to take shape as many projects that we are now working on have specific GIS deliverables. I am currently working on a pilot scheme to develop a file specification for submitting digital data on land purchase orders. This will ensure that a GIS source is the compulsory format for recording and updating this information.

Recently I led a two-day 'Industry Week' workshop at a local Secondary College, working with a group of fifteen GCSE Geography students. They already possessed a passion for Geography but by the end of the project, they were enlightened and excited by the potential of GIS in the 'real world'. In line with the Government's 14-18 agenda, my aim was to encourage the students to pursue the subject and skills-base in their future careers. By employing a lightweight GIS viewer, the students interpreted and applied local population and demographic data in order to plot the optimum location for a new retail complex in the Wakefield region.

Through access to, and involvement in, opportunities at the forefront of the construction industry, I am well placed to ensure that Geography and geographical information are rightfully embraced at all stages of environmental assessment and the planning process. I aspire to further promote GIS as a proactive tool for the future, meeting the demands and needs of a world in constant change and development, and feel that this along with the experience and knowledge I have demonstrated qualify me for Chartered Geographer. As a Chartered Geographer, I would promote RGS Fellowship and CGeog status as industry standards to both employees and colleagues, and I would be keen to become a CGeog mentor when my position and experience are considered appropriate. I would endeavour to continue my own professional development in attempt to ensure that our discipline can further evolve.