

Competence Profiles – Guidance for Applicants and Assessors

INDUSTRY CLASSIFICATION: ENGINEERING CONSULTANCY

The UK economy relies heavily on Engineering Consultants employing over 100,000 people and generating more than £10billion for the UK economy in 2008; for example they are pivotal to delivering renewable energy generation and the next phase of nuclear power plants; high-speed transport; and the safety of piped services such as water supply, sanitation and gas. They range in size from one or two people in a partnership to hundreds employed in a large organisation. They also cover an ever increasing scope in skills and technological knowledge and, this is where difficulties often lie in assessing candidates' competency, experience and breadth of knowledge. Small consultancies can often cover the widest spectrum of Engineering in various levels of detail, whilst larger organisations may offer less complexity in the role. It is mainly for their organisational skills, their expertise and their intellect that Consultants are called upon to render advice and assistance and they may well be recognised as leading authorities in particular areas of engineering. However it must be noted that there are engineers, setting up in a 'consultancy' role, who act to fill an employment gap when there is a shortage of certain key staff in a particular location, such as design draughtsmen or computer software operators for example; they are not within the remit considered here.

Accepting the Competence Profile for Application to Member, **Part 2 – Industry Classification (Y1) Consultancy and Local Government**¹ as read, then the competency levels for Fellow are as follows.

Essential

A Position of Senior Responsibility and/or Significant Autonomy.

The Applicant should have been a manager in an engineering context in industry to provide him or her with the experience to carry the responsibility as a consultant working within or for another client company. The current role should be that of a **Senior Consultant, Senior Partner or Director** with responsibility for projects with large budgets that offer the consultant the autonomy for strategy, financial and technological direction. In addition the **Senior Consultant** should be an expert at a National or International level in a particular field of engineering which the consultancy would value. Some consultants do work independently and as such would be expected to fulfil all the above criteria.

Promotion of Engineering to Young Engineers and Potential Engineers.

Engineers of major consultancies have the potential for passing on their considerable experience to other engineers through presentations at Seminars, Conferences and at Institution Branch meetings. Additionally, a consultant should have the expertise recognised and welcomed by engineering colleges as a visiting lecturer to undergraduates or post graduate students. It is not always possible for a Consultancy to have the young staff to avail them for mentoring by Senior Consultants but, where this is the case, it would be expected as a necessary activity of the Applicant to Fellow. Initiatives should also be in place to encourage young people to consider engineering for further education.

Leadership Qualities.

From previous managerial experience in industry, Senior Consultants could be expected to take responsibility for and to lead activity within Departmental functions of other Organisations, often as an interim senior engineering manager or director. In projects that are associated with developing technology and/or start-up manufacturing there would certainly be a strong involvement of a Senior Consultant directing the resources of the project through delegation onto the client's staff. Taking the lead in negotiating large contracts and taking the Chairmanship of National Committees on Regulatory Standards should be evident for a Fellow as Senior Consultant. Independent consultants may show evidence of leadership via task management as a consultant leading certain activities within a larger project.

Involvement in Policy and Strategy Making Decisions.

The Consultancy will be called in to offer advice that would influence the forward Policy of a client company in such a way as to be directly involved with the client at Board Level. Presentations on forthcoming strategy of the Consultancy-Client relationship and subsequent policy decisions would be undertaken by a Senior Consultant using the technical and business experience that is required by the client. This should follow

¹ See: <http://www.imeche.org/membership/industrycomp.htm>

through from initial planning and design stage and extend beyond commissioning into commercialisation of product or service. Independent consultants may show evidence of strategic direction through acting as a specialist in a small company where their experience has driven that company in a new direction or progressed the use of new processes that have improved the business overall performance and competitive edge.

Structured Approach to Continuing Professional Development Underpinning Ongoing Career Progression.

The consultant can never rest on past successes and needs to strive continually to improve his or her knowledge in line with the strategy of promoting business activity. Attending conferences, lectures and exhibitions, covering many aspects of technology, are part of the way of pursuing these goals. Keeping in touch with Government sponsored events and maintaining knowledge of standards, legislation and regulations is also necessary. Papers published in Technical Journals or in Conference Proceedings would be part of the marketing policy and PR of a Consultancy to promote their special expertise.

Desirable

Highly Specialist Knowledge in a Specific Area of Engineering.

Technical expertise is often paramount in Consultancy. There would be staff, not necessarily a Senior Consultant, providing a high level of experience and knowledge in the field in which that Consultancy operates. Over and above those skills in the application of fluid dynamics, thermodynamics, reaction kinetics, structural design and so forth, the consultant would have an appreciation of environmental issues. Some projects may need to have every aspect of the immediate and long term effects on the environment addressed in detail. Focus on manufacturing or process waste problems and end-of-life redundancy issues would be the within the responsibility of Applicant to Fellow. Some consultants may be regularly applying for and registering patents on their R&D technology as evidence of innovative technology.

Strong Evidence of Resource Management and/or Personnel Management and Development.

Recruitment and training strategy of the consultancy should be a factor to ensure resources of the pertinent skills are achieved and maintained. In all cases the experienced manager will be able to provide evidence of understanding the role of using the material and human resources to advantage. However, when acting with a client organisation then this implies knowledge of often complex industrial relations and an awareness of the influence the Consultants advice may have on the people within that organisation. Here the advantage of experience in managing people rather than the application of management theory can be telling.

Optional

Applies a Significant Range of Fundamental Principles and Complex Techniques Across a Wide and Often Unpredictable Variety of Contexts.

Working in the commercial advancement of new technology or processes demands pioneering techniques where there may be no precedent. This is when the broad background experience of the potential Fellow is important to ensure that all the relevant aspects of science can be used to address the problems of planning and delivering a project for overall success and business benefit.

Budgetary Control.

The Consultancy, to be a successful and legally responsible enterprise, would require the Senior Consultants to be fully conversant and responsible for all financial parts of the business. The Fellow should be a Partner or Director with the responsibility of negotiating high-value contracts and for sustaining a cash flow with active marketing and planned resourcing. He or she would have a clear idea of the Consultancy market, possibly by association with one of the Consultancy Common Interest Groups such as ACE.

Active Development and Application of New Technologies in Engineering and Related Areas at a Senior Level.

There are new technologies in all areas of engineering and there may be evidence of advances in the Applicants field. But there are engineering problems to be found in renewable energies and a Consultancy would be expected to be involved with promoting opportunities for their clients who were seeking advice on energy related projects. In such areas, as this and other environmental issues, the Fellow would be a champion of change.