

## **Competence Profiles – Guidance for Applicants and Assessors**

### **PART 2 – INDUSTRY CLASSIFICATION – CONSULTANTS**

#### **Introduction**

Consultancy is an increasingly important industry for the UK economy with revenues for 2000 estimated at £7bn, contributing over £1bn to the UK balance of payments and with new firms entering the industry all the time. Consulting companies range from the one-person company to large multi-faceted operations.

The best way to view this industry is to think of an 'old fashioned' large vertically and horizontally integrated business. In this type of operation all the services now provided by consultancies were integral to the business. However time has changed the way business is viewed and we now have the other extreme of the 'virtual' company with all functions and operations outsourced with effectively no direct employees internal to the company.

Consulting now encompasses the delivery or support of all business areas except the physical means of production (This may in itself be outsourced but is not consulting). Purists may contest this very broad definition, however the same broadening has happened to the term 'Engineer'!

Engineers who conduct business under the umbrella term of 'Consultant' cover a very broad church, bringing all manner of technical and managerial expertise within an Engineering environment.

<b>What do they do:</b>  New initiatives (lean, 6O, Kaizen etc) Strategy development, tactics etc Business planning Lean and organise multi-disciplined teams Business process reviews Design assessments Noise and Vibration H&S and Environmental issues IT systems linked to engineering MRP system implementation Recruitment and downsizing Project management Marketing Business development Technical forecasting Facility analysis Expert witness Innovation Studies Supply chain development, development and management Training and appraisals Interim Management – all roles Failure investigations	<b>Where to they do it:</b>  SMEs Large Companies Public sector Manufacturing Aerospace Transport Offshore Automotive Defence Oil & Gas Power Generation and Distribution  Any business or operation where a potential Chartered Engineer may be found
<b>Who are they:</b>  Individuals, partners and employees Specialists in technical or managerial fields Experienced engineering managers	

While the list above is very broad, a common thread running through a consultant's business life is geared around the entrepreneurial drive to generate business. Hence the consultant although skilled within their domain would not survive without highly developed sales and marketing skills. The roles adopted are many, however they tend to blend around two strands

- Support as an active resource

- Specific expertise to explore, investigate, analyse, recommend and implement change or problem solve technical or managerial issues

In other words to achieve a business result that cannot be achieved within the current company internal resources.

### **Requirements for election or transfer to Member**

The broad requirement can be categorised as

- Academic requirements met.
- If there is an industry competence already existing that allies to the applicant's experience and practice – use it. e.g if the applicant is a structural engineer in the field of consulting in the building sector undertaking outsourced designs for a modular building company refer to the construction sector.
- If the applicant's experience is wide ranging across industry sectors then the following competence statements should be viewed as an 'achievement based CV' finding achievements within the applicant's career which match the required level of competency

### **Assessment of Competences**

The professional mechanical engineering responsibilities associated with the above posts will depend on an applicant's qualifications, background and experience. Outline of competence areas:

- Consultants deliver either:
  - An interim management solution acting as an integral part of a company
  - A project or projects which may be complete in themselves
  - A part of a project or projects delivering an element of the project life cycle.
- Consultants have to demonstrate a competence throughout the project life formed by either one project 'cradle to grave' or elements of a number of projects which demonstrate competence.

### **Competence statement A – Knowledge and Understanding**

This section outlines the initial stages of a project from keeping abreast of technology to proposing potential opportunities linked to such technology.

- Maintain a sound technical approach in enabling the introduction of new and advancing technology and other relevant developments.
  - Keeps abreast of new ideas, methodologies, techniques and technologies and applies such knowledge either within the consulting company or within the client organisation in such a way that demonstrates a practical application introducing a significant new development which enhances profitability through cost, time or quality.
- Apply a creative problem solving approach
  - Identifies and agrees customer needs and applies a creative approach in investigating, analysing and conceptualising a range of solutions to achieve the agreed outcomes. Analyses such concepts for final solution to assess impacts for factors such as performance, reliability and maintainability and appropriateness for final proposal.
- Looks for ways of exploiting emerging technologies to enhance current practices and to ensure continuing fitness for purpose of engineering products and services
  - Thinks about and enhances knowledge in a lateral way looking across boundaries while fostering cooperation between disciplines to enable the application of new or emerging technology. Identifies opportunities for such applications to existing products and processes
- Promote innovation and technology transfer
  - Actively seen to be active in marketing new innovations into his organisation or client in a non-threatening way while involving others in a spirit of cooperation.

### **Competence statement B – Practical application of knowledge and understanding**

This section takes a project from the initial review to proposing a range of solutions.

- Identify potential projects and opportunities

- Reviews developments to assess applicability to areas of responsibility to improve the commercial position of the parent or client organisation
- Conduct appropriate research and undertake design and development of possible solutions
  - Takes potential solutions from concept to a state where they can be reviewed against each other with all appropriate technical, commercial, quality, safety and environmental aspects taken into account.
- Plan and implement solutions, taking a holistic approach to cost, benefits, safety, reliability, appearance and environmental impact
  - Takes preferred solutions to fully documented proposals including areas of risk and potential solutions.
- Evaluate the solutions and make improvements
  - Reviews the preferred options determining the impact on all aspects of the life cycle and stakeholders. Evaluates proposals against specification and identifies potential improvements and that the outcome is both practical and meets original desired outcomes

### **Competence statement C – Leadership and Management Skills**

This section takes the project from 'acceptance to proceed' with the preferred solution to final completion and handover.

- Plan for effective project implementation
  - Sets up a project from 'acceptance to proceed' putting in place all the necessary resources and systems necessary for the delivery of the project
- Plan, budget, organise, direct and control tasks, people or resources
  - Implements the project to achieve cost, quality and time constraints. Manages the teams, monitors performance and takes corrective action as appropriate.
- Develop the capabilities of staff to meet the demands of changing technical and managerial requirements
  - The project manager has a team of personnel assigned to him for all or parts of the project. During the time they are assigned their training, review and HR management are the project managers' responsibility. The project manager is effectively their line manager for the duration of their assignment and has firm responsibilities for both personal management and development and the acquiring of specific skills needed for the project
- Brings about continuous improvement through quality management
  - A project is effectively a mini business and comes under the full requirements of the appropriate quality ISO described in the company's procedures.

### **Competence statement D – Communication and Interpersonal Skills**

This section deals with the people management skills required to deliver a significant project.

- Work and communicate with others at all levels
  - Develops productive relationships and interacts in a positive and proactive way with the ability to influence and move discussions while bringing colleagues along with the developing interactions. Liaises with personnel both within and without the organisation and conducts communications effectively and efficiently.
- Effectively present and discuss ideas and plans
  - Presents to a high standard in both written and oral communication using appropriate mediums.
- Builds teams and negotiate
  - Builds, develops and manages effective teams through direct and hands on management

### **Competence statement E – Professional Conduct**

This section takes in the wider impacts of a project and its impact away from the immediate deliverable.

- Comply with the Codes and Rules of Conduct
  - Acts with integrity at all times within both client and parent organisations. Considers decisions and actions within a wider context within which the project is taking place
- Manage and apply safe systems of work

- Demonstrates though action that safety for client, parent, and general public at large is paramount in the performance of his work and project.
- Undertake their engineering work in compliance with the Codes of Practice on Risk and the Environment
  - Delivers a project that minimises effects on the environment and takes account of the potential through life impact.
  - Aware of legal liabilities and the need for Professional Indemnity Insurance
- Carry out the continuing professional development necessary to ensure competence in their areas of future intended practice
  - Develops his/her own competence within a structured program.

The observance of safe working procedures including compliance with internal and national codes of practice is inherent in virtually all engineering activities within the industry. Similarly, there are codes, which cover the design and manufacture of all equipment and components. Applications should be able to demonstrate their commitment to observing and promoting the use of any codes that are relevant

Evidence of professional integrity and commitment should include a Self-Development Action Plan, in any convenient format, outlining how the applicant intends to maintain and enhance competence through personal development.

### **Requirements for election or transfer to Fellow**

Applicants will generally have significant responsibilities for resources (both financial and manpower) and also have wide understanding of strategic, commercial and financial issues. They are likely to be experts in their particular fields e.g. and champions for their directorate, company or industry sector.

Valid applications for election or transfer to Fellow may be received from other engineers with established reputations in important positions of responsibility in engineering science or practice. This applies to engineers both in operating companies and in companies which design and/or manufacture equipment. In addition to demonstration of achievements and standing in their field of engineering science or practice, applicants would be expected to participate in external forums, for example by promoting the importance of engineering issues in debate with Government and other bodies, via the institution. In any case, an involvement in the professional development of young engineers would be expected, as would documentary evidence of Continuing Professional Development.