

# World Class Projects need World Class Project Control

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## Introduction

Project controllers make a vital contribution to the successful completion of any project. The skills in the project control disciplines provide the “eyes and ears” of good project management. The present set of occupational standards that provide the basis of the NVQs have been developed during 2004 from best current practice in industry and as such represent the latest body of competence requirements available today. Since their original introduction in 1997 many hundreds of candidates have completed their qualifications from the nuclear, railway, manufacturing, oil, gas, petrochemical, utility and construction industries

This presentation will cover information on the

- Project Control Standards
- Uses of the Standards
- The Assessment process
- Relevance to other qualifications
- Benefits to candidate
- Benefits to the employer
- Investment decision
- Benchmarking of Staff

## Why Competence Assessment for Project Controllers?

Project controls is a difficult subject to teach in a classroom environment because the work content is very much aligned with the Company systems or sometimes with those of a particular client. At Intermediate Level perhaps only one third of the knowledge required is technical, with another third being for people contact abilities and the final third is procedural. Thus class learning can at best provide the technical competencies, with the individual and the company providing the remainder. At Professional level the people portion becomes larger with a corresponding reduction for the others.

## The Standards comprising the Body of Competence

There are 51 standards each one a separate and self-contained unit of competence, covering all aspects of a project control practitioner's work scope. These have been developed around the five basic overlapping areas of an individual's work i.e.

- Technical skills
- Team and self management
- Starting a project
- Running a project
- Completing a project

All the disciplines for project controls are covered such that persons engaged upon specifically: - planning, cost estimating, cost management, or commercial activities are covered, or if required, a mix of these for multi disciplinary practitioners.

A committee of senior industry practitioners developed the standards; project managed by the Engineering Construction Industry Training Board and includes all the job requirements for each practitioner.

The Standards are supported by: -

- Qualification structures
- An assessment strategy agreed with Awarding bodies that deliver these qualifications
- Indications of where evidence relating to the Units is likely to contribute as evidence towards key and core skill units.

There are published qualification structures for both the Intermediate level and the Professional level qualifications, Currently there is a QCA sponsored development programme underway to complete the Foundation level set of standards for those persons who will be newly introduced to the arts and science of our profession.

### **Uses of the Standards**

- Preparing recruitment specifications and job advertisements
- Identifying components of jobs: present and future
- Job design and evaluation including job specifications, monitoring roles and responsibilities and establishing payment criteria.
- Training and development programmes including organisational needs, design of qualifications, developing knowledge content.
- Recognising individual achievements
- Continuing Professional Development
- Career guidance and development
- Auditing skills required and needed
- Professional requirements

There are many more detailed in publications prepared by the Qualifications and Curriculum Authority.

### **Project Control Occupations**

Occupations covered until the generic term of Project Controls include for anyone who supports the project manager in any of the planning, estimating, measurement and reporting functions of the project. e.g.

Project planning engineers  
Conceptual estimators  
Cost engineers and controllers  
Multi-disciplinary personnel

Project scheduling engineers  
Detailed cost estimating engineers  
Commercial support personnel  
Project auditors

These persons will be engaged on many different tasks at various times during the project life-cycle e.g

|                         |                           |
|-------------------------|---------------------------|
| Risk analysis           | Project planning          |
| Earned value analysis   | Work breakdown structures |
| Whole life costing      | Detailed scheduling       |
| Conceptual studies      | Detailed cost estimates   |
| Forecasts to complete   | Change control            |
| Variance control        | Cash flow                 |
| Tender submission       | Asset registers           |
| Bid and tender analysis | Procedure preparation     |
| Claim analysis          | Management reporting      |
| Audit benchmarking      |                           |

### **Relevance to academic achievement**

Competence qualifications should be considered as a requirement by a practitioner that he or she can do (has done) the work required in the workplace and this is not related to previously gained academic qualifications or any preceding technical activity in another area of employment.

In these days a worker can expect to have several career positions each one building upon experience or knowledge gained from earlier work. Each new occupation will need to be learned and later demonstrated to clients, peers and professional bodies.

There are three levels of competence qualifications for project control activities i.e. Foundation, Intermediate and Professional; each one is built upon skills gained from the one before. All, or any, may be taken by any new entrant to project controls activity from any background at any time in their overall career.

It is becoming general practice now by bodies such as the Engineering Council or some of the Professional Institutions to recognise an individual's status by two distinctly different areas of development.

1. Academic achievement, possibly a degree or other learning qualification
2. By a measure of workplace competence such as NVQs

Both of which are a constituent part of the application process for professional membership or the desired certification.

### **Benefit to Candidate**

This process benefits the candidate in several ways.

- As a means of appreciation of the full work-scope required of a full practitioner at time of entry into the profession.
- By rapid and controlled exposure to more areas of the full work-scope he/she gains a broader understanding of how all the parts of the work-scope fit together, thus resulting in less questioning of others or alternatively fewer mistakes through lack of knowledge.

- By becoming more confident of his/her position is able to contribute more to the team effort more quickly.
- By being able to work faster and therefore becomes a more valuable personnel resource
- As an aid to job opportunities as a demonstration of work experience and understanding.
- As a demonstration of commitment to the profession of project control.
- To gain access to the ACostE (the home of project control professionals)

### **Benefit to employer**

- By being able to work faster and therefore a more valuable personnel resource
- As a criteria for recruitment and selection of applicants for interview.
- As an improved means of demonstrating the value of an employee to potential clients
- To identify training and development needs

### **Candidate analysis**

Before starting anyone on his or her programme of assessment, TASC require completion by each candidate of a questionnaire to establish the opportunity of the individual's work-scope to provide evidence for the portfolio. This analysis method can also be used to establish the candidate's training needs or progress over a period of time.

### **Assessment process**

The delivery concept of NVQs is through "one to one" meetings with the assessor, to measure a candidate's competence by matching products of his or her work against the appropriate units drawn from the full set of national standards. During the review of the evidence items, confidence will be gained by the assessor through questioning and witness statements, that the candidate has done the work and has the required complete background knowledge.

No time will be required away from the workplace other than the initial one-day induction, which may be held on site. All assessment tutorials will be arranged as required and convenient to both parties. Sometimes electronic assessment can be operated particularly if the candidate and the assessor are remote from each other.

### **Evidence Assessment**

Evidence will be gathered by the candidate to match against the requirements of the standards and will be judged by the assessor as being relevant, timely and owned by the candidate. There are four principle types eg

Products of work

Witness testimony

Personal statements

Replies to questioning.

Sometimes observation can be used but this is rare for professional qualifications such as those for project controls.

The full professional qualification from induction to completion, takes approximately one year to achieve with about ten meetings with the assessor. The candidate will spend about 150 hours of his/her time in collecting evidence and meeting the assessor and at the end of this time will have experienced the whole job scope required by the full practitioner. Sometimes assistance from the management is required to arrange opportunities for the candidate to gain an experience and resulting evidence by special short duration assignments or work items.

### **Remote Assessment**

Where a candidate is located many miles from his/her assessor TASC have developed a very successful method of assessment using electronic communication systems. This will require a video-link for the induction, the creation of two portfolios and contact rules to avoid the problems associated with time zones. Experience has shown this method ( with the right candidate) can be quicker than the traditional method as there is no waiting time between assessment tutorials.

### **Investment decision**

In the major manufacturing and construction industries a project might last for many years, thus normal opportunities for experience come very slowly.

The Professional Level qualification from induction, takes approximately one year to achieve and will provide the candidate with a much quicker understanding of all the activities required of a project and thus develop a wider understanding of the whole and individual activities required.

This would be compared with the more traditional method of on the job learning, where an employee develops at the projects progress (if he/she stays with it for the full duration).

The need for skilled personnel is always a major requirement for a project manager and it follows that rapid in-house competence development will aid the efficiency of the project. Cost savings can be counted as follows: -

- Saving on recruitment costs by developing current junior employees
- Saving in office time by more efficient working
- Saving the time of others through less interruption for instruction

## **Staff Benchmarking**

### **Introduction**

In late 2005 TASC was invited by a well known construction consultant and a major manufacturing company to consider a method of measuring their project controls staff for competence and ability against the entry requirements for the Project Controls Intermediate Level 3 and Professional Level 4 Occupational Standards. Their problem centred on the difficulty they had in determining whether their staff were

- a. ready for the qualification or

b. which staff to put on the programmes.

This problem was resolved by the use of the current TASC project control qualification's Initial Candidate Evaluation Questionnaire, modified to give an activity performance marking.

### **Self Assessment process**

The self assessment questionnaires which must be filled in by a candidate to commence the evaluation process, are entirely based upon the Intermediate or Professional Level Qualifications. All persons completing them must be entirely honest in the responses of where information can be found or whether it is available to him/her.

The application of the self assessment questionnaire process identifies particular strengths held by the candidate and also conversely, highlights activities where the candidate would benefit from specific training, work experience or knowledge. A particular benefit shows where his/her work role does not cover all the areas of the National Standards and departmental performance may be enhanced by re-defining operating procedures, such that more benefit may be gained from the individual's performance. During trials of the benchmarking study we identified several practitioners who were not being used within the department to their full potential, due to past experience and knowledge not being used in the present role.

Many candidates do not have the full breadth and depth of experience and knowledge to meet all of the requirements of the National Standards, this is quite normal as within every project control department there exists a culture of providing information to management in all the disciplines, according to the operating methods and procedures of the company.

### **Assessor Review.**

The initial review of the returns by the Assessor will identify issues from within the candidate's responses that should be discussed with him or her for clarification. Any other matters the Assessor believes may be relevant to the outcome may be raised to ensure that the self-assessment is as accurate as possible in relation to the requirements of The National Standard.

The candidate will then be contacted to arrange a short interview following which the Assessor will use the self-assessment form to create a report that

- Indicates particular experience and knowledge strengths either currently used or from past experience.
- Indicates where the candidate could provide more to the departmental output.
- Identifies areas where the candidate would benefit from training and or work experience as part of helping to realise his/her full potential.
- Suggest what steps should be followed to translate the results of the self assessment into nationally and internationally recognised qualifications at the appropriate level.

## Benchmarking

Using the procedure noted above if the client wishes to move onto the next step TASC are able to use the returned self-assessment forms to mark the result for each section of the form against the norm for best practice which we would expect.

For example: -

- 0 – No knowledge or experience
- 1 – Aware of the activity but little practical knowledge of experience
- 2 – Competent to deliver at Intermediate level
- 3 – Competent to deliver at Professional level
- 4 – Recognised expert can supervise others and advise clients.

The full set of Standards is composed of several sections each of which covers a particular type of responsibility. These are: -

- Using technical skills
- Working with people and managing yourself
- Developing the project
- Project implementation
- Closing our the project

Some of the standards are mandatory and others are optional, thus from the total of 51 standards all together, 20 are required to fulfil the requirements for a Professional qualification and 12 for the Intermediate level, at whichever discipline option the candidate selects.

Thus completion of a full self-assessment questionnaire will automatically lead the reviewing assessor to determine the preferred discipline choice for each candidate.

Each level of competence requires a minimum number of gained points in the marking system thus we could expect the benchmark of achievement to be

| <b>Activity Group</b>   | <b>Intermediate Ratings</b> | <b>Professional Ratings</b> |
|-------------------------|-----------------------------|-----------------------------|
| Using technical skills  | 10                          | 15                          |
| Working with people     | 6                           | 15                          |
| Developing the project  | 4                           | 9                           |
| Project implementation  | 6                           | 15                          |
| Closing out the project | 0                           | 6                           |
| <b>Overall rating</b>   | <b>26</b>                   | <b>60</b>                   |

## Reports to Client

Within the final evaluation report, which will be sent to the client, will be the marking attributed to each candidate based upon the self-assessment form reviewed and the subsequent short interview. These marks will be measured against the table above and recommendations made to the client regarding the suitability of the candidate to attempt to gain the National Vocational Qualification at the next level up. It must be noted that this evaluation forms

only a snap-shot of the candidate's competence and ability at the time of the survey and may need to have the management judgement added to complete the picture of the individual in question.

From these results the manager may determine where to

- gain maximum benefit from his annual training budget
- support his staffs annual appraisal,
- measure the development needed for particular members of staff.

An additional use has also been suggested. If performed on a regular basis - say annually, this survey would provide an independent measure of progress achieved during that year by individuals or by whole departments.

### **Progress to the National Qualifications**

Following completion of the self-assessment process any person wishing to progress to the appropriate qualification would be given a reduction in the price of the qualification, equal to the cost already paid. As a standard part of the normal qualification evaluation procedure it will already have been completed and therefore not required again.

### **The Occupation Standards**

The National Occupational Standards for Project Control cover a wide range of activities in cost control, planning, estimating and commercial support. These may be seen on the ACostE website [www.acoste.org.uk](http://www.acoste.org.uk) and found within the TASC area of the web-pages.

Several companies have already agreed contracts with TASC to carry out this procedure on their staff around the UK. It is considered to be a cheap and easy means of determining the department's strengths and weaknesses prior to embarking on expensive training programmes for the staff.

### **Conclusion**

The Assessment Service Centre (TASC) formed by the Association of Cost Engineers in 2004 to provide a "not for profit" service to the project controls industry. The offices are based in Sandbach, Cheshire with the assessors working all around the United Kingdom.

TASC uses assessors and verifiers who are fully registered and qualified in the skills of assessment processes and who are long-term project controls practitioners.

The qualifications are provided through the ECITB as the awarding body and are fully quality assured through the exhaustive controls exercised by the national procedures.

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