



UKAS Accreditation

Use of TickIT as the Benchmark for Software

1. Introduction

In November 1997, the Policy Advisory Committee of the United Kingdom Accreditation Service advised that it was inconsistent with international obligations to maintain TickIT as a mandatory scheme for the certification of organisations involved in software development.

As a consequence, it was resolved that certification bodies would be free to offer alternative services as desired by their clients. However, recognising the concern from main buyers that such a change in policy must not undermine TickIT through the possible availability of less competent certification, it was also resolved that UKAS would use the TickIT Scheme as the benchmark for all alternative accreditations of software certification.

Following consultation with TickIT and the industry, this paper was produced. It identifies those elements of the TickIT Scheme which will be benchmarked by UKAS to ensure that alternative certification services are being provided to a comparable standard.

2. Benchmarking Elements

TickIT was introduced as a mandatory certification scheme by the DTI at a time when the numerous variations in certification management in the software sector had resulted in a total loss of user confidence in certification. In order to restore confidence in this strategically important area of industry, a more uniform interpretation of ISO 9000 and related international documentation, applicable to software development, was adopted for TickIT and embodied in the TickIT Guide.

Now that TickIT is non-mandatory but is to be used as the benchmark for accredited certification purposes in the software sector, consistency of approach by competing certification bodies and the paramount need to maintain market confidence require that the following elements meet standards that are equivalent to those set by TickIT:

- Management competence in the certification bodies concerned
- Terminology used in certification scope statements
- Auditor competence
- Auditor training
- Application and use of recognised guidance documentation

3. Certification Body Management Competence

Description of Issue

A certification body needs to be able to add value to the auditing process by being competent in recruiting, briefing, training, deploying and monitoring its auditors. Thus, staff within the headquarters must have the requisite business, technical, commercial and auditing knowledge and experience of the needs of the software sector to be effective as scheme managers.

Benchmark Considerations

- Headquarters staff must have up to date active experience of software development in the relevant fields of application, or there must be evidence that the certification body has access to such expertise from a source that is actively engaged on all such matters in the certification cycle, or evidence that the certification body has a teaming agreement with a certification body that meets this benchmarking guidance.
- Headquarters staff must have knowledge and experience of relevant technical and quality management standards.
- Evidence must be available to show that auditors are assigned tasks commensurate with their competence.
- Mechanisms should be in place to ensure that such expert knowledge is kept up to date with advancing technologies.

4. Terminology used in Certification Scope Statements

Description of Issue

The creation of software is an intellectual activity and, if complex, confirmation or otherwise of its quality can only be determined during the design life cycle. As a consequence, organisations that develop software for products or services must include software development and/or software integration in their certification scope.

Benchmarking Considerations

- When developed software is included in the supply of products or services the certification must be to ISO 9001.
- Certification scopes must not be artificially reduced to exclude software when the product or service could not work without it.
- ISO 9002 can be used in those cases where software development does not take place but auditor effectiveness demands that the services of an auditor with software development expertise is employed, for example, in the configuration and installation of computer based systems which utilise pre-existing designs to meet customer requirements.

5. Auditor Competence

Description of Issue

All auditors working within the TickIT scheme have attended a recognised TickIT auditor course and passed a face to face interview with three independent software development and quality management specialists to ensure they are properly competent – reference IRCA/162/97/1 ‘Becoming a TickIT Auditor’.

Benchmarking Considerations

- Those practising as auditors in the software development field must be able to demonstrate work experience in software development, training in technical matters associated with information systems development and have had their career achievements recognised by peer bodies.
- Software development auditors will have a competency profile commensurate with that specified in IRCA/162/97/1, or any revision thereto.
- Software development auditors will be able to demonstrate maintenance of competence in software development matters by participating in some recognised CPD scheme or attendance at suitable events for the number of requisite hours as specified in international documentation.

6. Auditor Training

Description of Issue

Software development auditors should be trained on auditing courses which base the learning objectives around the subject of software development and its supply.

Benchmarking Considerations

- Training will be on audit courses that cover a syllabus equivalent to that specified in IRCA/2012/97/1 or any revision thereto.
- Training courses will be run by trainers with up-to-date competency.

7. Application of Recognised Guidance Documentation

Description of Issue

The ISO 9000 quality standards are generic documents which do not contain any particular technical emphasis. To be effective they need to be applied through the application of agreed best practice. The TickIT Scheme uses the guidance contained in ISO 9000-3:1997 and ISO/IEC 12207:1995, and the TickIT Guide references other technical documents that may be used.

Benchmarking Considerations

- Audits are planned and executed by applying ISO 9001/2 via up-to-date and relevant best practice guides.
- Audit plans show those relevant software development topics that have been evaluated during the course of the audit.
- Nonconformities raised during the audit and explained in relevant terms from the best practice guide are referenced to clauses in the relevant requirements standards.

8. Implications for UKAS Accreditation

In the light of the above, the following implication should be noted:

- Where alternative services offered by certification bodies meet the TickIT benchmark, software may be properly included in the scope of ISO 9000 accreditation.