

TickIT Plus – the Future of TickIT!

by Derek Irving

As indicated in the last issue of TickIT International, the Joint TickIT Industry Steering Committee (JTISC) have embarked on a project to redevelop the whole TickIT certification scheme. I hope in this article therefore to give a clear summary of the proposals and progress to date. It is planned that we repeat this in future issues of TickIT International as the project develops.

Last quarter, two questionnaires were posted on the TickIT web site and we asked for your views on a number of points. Those who responded will at least, therefore, have a flavour of the proposals that this article will build on. (For those who haven't responded, it's still not too late!)

Why Do We Want to Update TickIT?

Well, if there's one thing that most involved can agree on, it's that the scheme is starting to look outdated and is no longer the key driver for software quality that it was 15 or so years ago. **TickIT still has many merits: most obviously it is linked with ISO 9001 certification; it ensures that auditors are suitably qualified and it identifies and assesses best practice against established guidance material and ISO/IEC standards.** Where it is looking outdated is against other process and capability based models, such as CMMI, which have wider international recognition and focus on capability measurement and improvement. So, with technology, perceptions and needs changing it was felt that this is the right time to address these issues. There's **also another reason why this** can be considered a good time: the fact that there are now a large body of ISO/IEC IT standards (some would say too large) that are maturing and form a cohesive structure on which to build a new scheme.

By inviting comments and opinions in the form of questionnaires, direct review of material and sitting on various committees, you gradually build up a consensus of what may be wrong at present and what would work in the future. It also brings home the fact that there are almost as many views as there are people expressing them, some quite passionately held, and many in complete opposition to one another. JTISC therefore need both to **keep aware of user opinion whilst at the same time set a clear direction and develop a system that** will satisfy as many as possible and meet the overall needs of the IT industry, its regulators and users. This brief article therefore attempts to lay out how we intend to change TickIT, the rationale behind some of these decisions and the intended series of events taking us from where we are now to a new, established and functional system. Please bear in mind, however, that this is an evolving project; some of the concepts are now clearly established, others less so. So over the course of this work, details described here may – indeed probably will – change in detail.

We are calling the new scheme 'TickIT Plus', which we regard as a working name at this point, although it's the only one we have and therefore is liable to become the actual title. If anyone out there has any better ideas, then please let us have your suggestions.

At present, TickIT is what is known as a 'Sector Scheme' and extends a basic ISO 9001 certification to cover software activities, based on guidance material and conducted by a body of auditors with experience of software. Guidance means how to determine whether the processes and outputs related to IT activities meet the requirements of ISO 9001, which is the core requirements standard. Nothing is mandated in TickIT, only in ISO 9001. One company can have the best software development processes and products in the world; they can deliver outputs and services to their customers which are the envy of all, but at present all they get is a basic ISO 9001 and TickIT certificate telling their customers and staff that they have achieved a standard set of requirements. Another company may struggle at every turn, perhaps have several attempts to obtain an ISO 9001 and TickIT certificate, yet outwardly their reward in certification terms is exactly the same.

When TickIT was set up in the early 1990s the focus was very much on software development. Times have changed and many organisations have a much wider scope – or one that may not even include development – areas such as IT management, service support and information security can often be far more important to companies today. These are the fundamental areas that TickIT Plus will address: providing a process capability grading and allowing the option of selecting which aspects and IT standards are appropriate to include under

certification. But we also have to recognise that many currently TickIT-certificated organisations will have no need or desire to change and so their requirements have to be catered for as well.

A key Tenet Behind Tickit Plus is Flexibility and Adaptability

Organisations should be able to select what they need, when they need it, and have their efforts recognised. At the same time we want to make it harder and more worthwhile: you can operate at the basic level more or less as now, but if you want a higher capability rating, then that becomes increasingly difficult. Guidance is replaced by both guidance and requirements. At the other end of the scale, the TickIT Plus model will become available to all, whether certification is the aim or not. Documentation will be restructured, made available on line, some of it free or at low cost depending on need. We hope to encourage a much wider take-up of the model and basic components, to develop an industry standard in the UK and internationally. So those companies who do adopt the certification route can do so in the knowledge that their efforts are recognised and worth something to their customers and staff.

We haven't forgotten TickIT Auditors of course – they are key to success and are a community to which I belong. We want to improve auditor training, qualifications and recognition. We also intend to open up the training and qualification structure to others who have no need or desire to become auditors, such as Quality Managers and consultants.

This is both an ambitious scheme and a radical change to the present TickIT system and below I'll outline the basic concepts in more detail. But please bear in mind again that this is an evolving scheme, details may well change as the project develops – but we intend that these changes are restricted to the details. We are now some six months into this project and the basic structure described below is now fairly well established.

So, To Summarise the Basic Concepts of TickIT Plus:

- provide a means to assess the process capability of an organisation, similar to the approach used by CMMI – this is termed the 'Capability Dimension',
- allow a wider range of processes and IT-related standards to be covered within its framework and by ISO 9001 certification – this is termed the "Process Dimension",
- provide for a clear and concise definition of the organisations scope of activities – the 'Process Reference Model',
- provide for a more structured and formal approach to improvement and assessment planning – linking internal improvement plans and initiatives into the assessment cycle,
- make clear the specific requirements for certification under ISO 9001 and TickIT Plus rather than relying on guidance material only, and with a clearly structured set of easily accessible and affordable documentation,
- provide a 'Self Assessment' route where organisations can design, build and internally assess their IT processes without the need for third party certification, but which can eventually be transferred to a fully certificated scheme,
- provide an improved framework and infrastructure for the training, qualification and development of both TickIT Plus auditors and non auditors,
- set in place the infrastructure for the regulation, ongoing support and development of TickIT Plus.

All this will be within the framework of existing ISO/IEC IT standards and recognised professional qualifications and training. It will also cater for the adoption of TickIT Plus over a phased transition period and allow existing certificates to be migrated with minimal cost at the basic level.

Over the course of the next few months a more detailed specification of the scheme will be made available on-line, but below is an expansion of these aspects. The target date for delivery of the scheme is May 2009; following that there will be a three year period of transition to allow organisations with existing TickIT certificates to migrate. It is emphasised that this should be a minimal cost and effort exercise: some work will be needed, in most cases in terms of process definition, but this is little more than required under ISO 9001 anyway.

The schedule is ambitious and at present resources are less than we would like, so additional help from all quarters would be welcomed.

The Capability Dimension

It is not planned that TickIT Plus is a replacement for CMMI: there is a different approach to assessments and ongoing maintenance and improvements. TickIT Plus is seen as a potential bridge in this direction and more suitable for smaller companies, those not wishing to take the CMMI step or those who embrace both approaches. It is based around the ISO/IEC 15504: Information Technology – Process Assessment standard, and to which the CMMI model is linked. This defines five levels of process capability as described in Table 1.

ISO/IEC 15504 Capability Level	TickIT Plus Capability Level
Level 1: Performed process	
Level 2: Managed process	Bronze
Level 3: Established process	Silver
Level 4: Predictable process	Gold
Level 5: Optimising process	Platinum

Table 1: ISO/IEC 15504 and TickIT Plus levels

The four capability levels for TickIT Plus: Bronze, Silver, Gold and Platinum are those making up the capability dimension. Bronze is the starting point and is seen as equivalent to the existing TickIT certification.

The Process Dimension and Process Reference Model

Whilst it may seem to some that there is an ISO/IEC standard for every conceivable aspect of IT, this is a set that can be regarded as a central framework for building IT processes.

ISO/IEC 15288: System Life cycle Processes and

ISO/IEC 12207: Software Life cycle Processes form a generic framework of system and software processes;

ISO/IEC 20000-1: IT Service Management

ISO/IEC 27001: Information security management systems, Requirements, and

ISO/IEC 25030: Software Product Quality Requirements and Evaluation.

These, together with ISO 9001, will form the core of TickIT Plus. These standards describe a large number of common process areas and it makes sense to address them within one process structure, this is the role of the Process Reference Model.

ISO/IEC 15504, ISO/IEC 15288 and ISO/IEC 12207 will form the core around which TickIT Plus is designed: the capability model and the process structure. Each of the other three standards: ISO/IEC 20000, ISO/IEC 27001 and ISO/IEC 25030, termed 'Requirements Standards', are all optional standards that can be included under the TickIT Plus certification. I want to stress that these are optional; there will be no compulsion to include these requirements if not needed. The term 'optional' becomes less so as levels of capability increase, since it is not unreasonable to expect companies with high levels of maturity to be addressing fundamental concerns such as service, security and product measures – but at the lower levels there is full flexibility.

The Process Reference Model (PRM) is a generic concept described in ISO/IEC 15504 and other standards and as such is fundamental to TickIT Plus. This means that all certified organisations – including those at Bronze – will need a formal PRM, and this basically is the only additional requirement on organisations from the current TickIT at Bronze level. Bearing in mind that ISO 9001 also requires processes to be defined, this is not considered too onerous a requirement. TickIT Plus also provides for the inclusion of other IT related standards, for example IEC 61508 dealing with safety-related systems, or BS 25999 covering business continuity, but these are covered by scope statement definitions, although there would need to be requirements defined around their inclusion.

Improvement and Assessment Planning

Improvements, the PDCA loop, and so on, are key aspects of ISO 9001, but at basic certification assessments are left pretty much as a demonstration only. With TickIT Plus this is formalised, again related to the capability level. Above Bronze, formal improvement plans will be required: verified against and will be used by and influence the surveillance cycle that Certification Bodies use. It is therefore seen as a closer relationship between the certified organisation and its Certification Body in driving improvements and focusing their audit requirements and activities.

TickIT Plus Documentation

Documentation will be rewritten and restructured. This will be a combination of guidance and requirements and focused on those who need it in the form they need it. Most of the material will be available on-line, some of it free, some of it at low cost, some of it at a higher premium. This is in line with the desire to see a higher take-up of the general TickIT Plus concept and self assessment. There will be simple to use guidance material on process building and utilisation, interpretation of standards, examples of cost benefits, incorporation of popular life cycle models, full indexing etc. An organisation looking at TickIT Plus for the first time should not be overwhelmed by the requirements and density of the documents. There will be a quick start guide, guidance for developers, quality managers and internal assessors. The current TickIT website will be expanded to cater for this information and **updated regularly**. **Other documentation will be much more formal and used only by the regulators** – Certification Bodies and so on – this is intended to be a fully accredited and regulated scheme and as such will needed detailed requirements.

Non Certificated TickIT Plus

Many organisations do not favour certification, and specialised certification even less so. There are many reasons for this: cost, complexity, inappropriateness and so on. With TickIT Plus, an organisation will be able to use the model for free or at minimal external cost, whether they be a large or small concern and whatever their business model and use of IT. If they later decide that certification is appropriate then the necessary structure will be in place and fast track methods of gaining certification will then be available. A central aim of this project is to build up a much wider community of TickIT Plus users so that the model is recognised and respected as a benchmark of quality in IT.

TickIT Plus Auditors and Practitioners

In line with the additional demands on certified organisations, there is a need to redefine the qualification and training of auditors and non auditors alike. The term ‘Practitioner’ has been introduced and will cater for individuals such as consultants, company software personnel, quality managers and other internal staff who need some form of training and possible qualification in TickIT Plus. Auditors will need grading just as organisations do but the full approach of this has yet to be decided. What is clear, however, is that training should be based on existing courses and material provided by established trainers rather than trying to reinvent what is already provided; providing of course this meets TickIT Plus requirements. Specific TickIT Plus training will focus on how the elements of the scheme work and are assessed; it is intended to be available in a wider range of formats, some provided as traditional courses, some available on-line for self study. There will also need to be a new approach to regulating TickIT Plus auditors, but again, this is still under discussion. What is clear is the need for a more rigorous approach to qualification and continuing professional development.

TickIT Plus Infrastructure

JTISC is the body charged with running TickIT and eventually TickIT Plus; it is made up of key users, suppliers, professional bodies and regulators of IT in both the UK and Sweden. It is planned that the scheme adapts and evolves as industry needs change. Material will be continuously reviewed and updated. Other issues such as how the scheme will operate within its regulatory framework have yet to be determined.

Outline of Plan

As mentioned earlier, we are now some six months into the project and, like most evolutions, it takes time to generate momentum. The specification details are now reaching a point where we can start to generate the scheme documentation; we are in discussions with regulators over the structure and operation of the scheme; we are about to embark on the marketing effort and are starting to consider what trials will be needed and how they can be managed. The implementation target of May 2009 imposes a very tight schedule, but one that is achievable given the required resources.

Summary

These, then, are the basic concepts for the future of TickIT. It's a radical plan, but unless this is tackled now and head-on then a great opportunity will have been lost. We have already outlined our plans to the key regulatory and user organisations and so far have broad support and considerable involvement. As mentioned above we have an ambitious schedule and target to meet and are always open to constructive comments and direct input. Any individual or organisation wanting to be involved, help with reviews, contribute material or assist with our programme of trials then do please contact me at dkirving@iee.org. We may not always agree with your comments or ideas, and won't be able to cater for every wish, but we'll always take notice.

In future articles I hope to keep you up-to-date with developments, but for other or more immediate information please go to the TickIT website at www.tickit.org.

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