

Test & Evaluation Review

...Examining a vital piece of the capability jigsaw

Developing battle winning capability depends on a number of issues, just one element of which is buying the best kit. Test & Evaluation (T&E) for all equipment is also a critical and on-going part of the process- ensuring equipment meets specifications, is fit for purpose and safe for use.



The Niteworks *Test & Evaluation Review* was commissioned by MOD's Head of Capability (Joint Training Evaluation & Simulation) in April 2010. The team was challenged to examine the current cost of T&E in the MOD and review the benefits that could be achieved by transforming the MOD's approach - evidence that would be used to inform the Strategic Defence & Security Review (SDSR).

Niteworks' access to industry experts enabled it to rapidly assemble a team. It began by addressing an initial customer request to assess the current estimated cost of the supply of T&E to MOD. The team accessed a variety of sources of data, including the cost of a Long Term Partnering Agreement with QinetiQ to provide T&E facilities, as well as third party facilities, government furnished equipment and personnel.

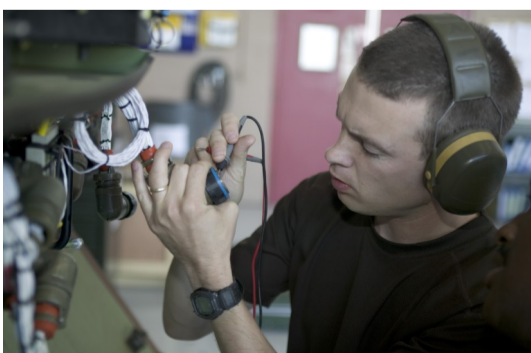
The team then considered the benefits that could be realised by modifying T&E arrangements. Previous MOD effort had focussed in the equipment area on the *supply* aspects of providing T&E- eg looking at whether MOD was overprovided for internally and by industry in terms of both facilities and services. The team noted that effort was now also being applied on bearing down on the *demand* for T&E generated by equipment projects, in order to reduce costs. However, it advised that care should be taken to ensure that reducing costs through reduced T&E did not inadvertently increase the risk to equipment programmes- both through safety issues or through continuing programme delay resulting in cost overruns.

The team recommended that MOD should look again at its commercial procedures for the procurement of T&E. The experiences of the Niteworks team in other public sector environments showed that commercial arrangements could be improved: for example, requirements for T&E could be bundled into lots to drive down costs, and contracts with a wide range of long standing suppliers could be retendered to consolidate the number of suppliers and achieve efficiencies of scale.



The team's consideration of the potential benefits of transformed T&E clarified that evaluation had a much more critical and broader role to play, concluding that it should be at the heart of capability definition and acquisition reform. The really significant benefits could be realised by transforming the MOD approach to evaluation in the management of enterprise risk by implementing a through life approach to evaluation of military capability.

For this stage of the project, the team looked at good and bad practice- both within the MOD, across the broader defence industry and in outside comparator industries- through conducting a series of interviews. The team found that the standards and requirements against which you test are a major cost driver, through both volume of activity required and time taken. It interviewed London Underground, which had carried out a full review of the standards being applied to an upgrade of its lines. This review allowed it to scrap a significant proportion of the requirements for the programme, in turn reducing the need to specify, design and test against them. This resulted in an impressive 20% saving in its programme costs. Interviews also highlighted the benefits that can be achieved when T&E is fully integrated throughout the life of a capability: the organisation developed a fully integrated evaluation team, embedding its T&E staff in the sub-contractor development team for the Victoria line upgrade. The approach reduced the development costs of the programme by 30%.



A final consideration was the significance of T&E in relation to the risk of project overruns. Bernard Gray's review of Defence acquisition had found that the largest factor driving project cost overrun is *timescale* overruns. Most of that is caused by technical factors- exactly the problems that T&E should help to identify and mitigate. With the average delay of MOD projects running at 16 months, with an associated cost of this lying between £920M and £2.1 billion, the Niteworks team concluded that improved T&E through integrated through life evaluation offered potential for significant cost avoidance as well as cost saving.

In sum, the *Test & Evaluation Review* found significant benefits can be gained by recognising evaluation as a much more important enterprise risk management tool for the MOD as a whole. The breadth of expertise across the Niteworks partnership, and its experience and contacts across both defence and non-defence sectors, was key to achieving these results.