

**EXPERIMENTATION AND TRAINING**

Both experimentation and training are vital. The recent revitalisation of the Niteworks partnership between MoD UK and the defence industry has provided new guidelines aimed at providing decision support to current and future military capability. We look at both the past and the future of Niteworks. As for training, we examine the burgeoning field of unmanned aircraft where spending may total \$55Bn over the next ten years, and the future of collective training through distributed simulation

# Niteworks: Finding its Voice

by *Simon Jewell*

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It was not long after I had taken the helm at Niteworks that the news came through from MoD that its Niteworks partnership with industry might not proceed beyond the Assessment Phase due to conflicting priorities within the Equipment Programme. It was the classic conundrum: whilst Niteworks was appreciated for what it did, it had to compete against a myriad of other compelling funding priorities, many of which directly supported the front line. To argue for Niteworks was in effect to take money away from these equally deserving priorities. We needed to be certain that this was the right thing for defence, not simply for the partnership.

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As a former soldier I had empathy with those who advocated that priority should go to the front line, yet also knew that not investing in optimising our future decisions was short-sighted and ultimately could prove costly in money and lives. The challenge became clear: prove that Niteworks could directly contribute to the efforts at the front line; demonstrate that it was an effective source of decision support that allowed the

defence planners to optimise their future investments; and turn a tactical success into a strategic asset.

## Looking back

When Niteworks was launched in July 2003, it was established 'to provide an integration and experimental environment to assess the benefits of Network Enabled Capability (NEC) and the options for its effective and timely delivery.'<sup>1</sup>

Over the following three years the partnership brought together nine industrial partners (BAE Systems, EADS, EDS, General Dynamics, Logica, MBDA, QinetiQ, Raytheon and Thales) and over 30 associates to examine this problem space. A tenth partner was added in the form of Finmeccanica in the autumn of 2007.

Since its inception, Niteworks has worked hard to embrace the specialist skills in the UK defence sector and combine them with the experience of current warfighters and the knowledge base of the defence establishment. During this time, it delivered over 25 Themes, each comprising a defined question co-developed with an MoD sponsor, a set of analysis and evidence principally derived from warfighting experimentation drawn together with a report that captures the learning, architectures and supporting materials, along with a set of recommendations (interventions) for the sponsor to review and implement. In its first three years it delivered benefits worth over £450M (a 9:1 return on investment on the initial £47M Assessment Phase contract) to the MoD.

However, towards the end of the initial Assessment Phase it became clear that MoD was not yet ready to commit to the next phase of the activity and the decision was therefore taken to enter a Migration Phase, a £12M continuation contract which enabled the partnership to complete a number of unfinished Themes and continue to provide a service while its future was debated. Inevitably this had the potential to destabilise the Niteworks team and it is to their great credit,



and says much about the strength of the partnership and the commitment of the MoD sponsors, that the team held fast and continued to focus on their deliverables and did not allow itself to become consumed by self-interest.

### Assessing the Partnership

As mentioned above, the recent history of Niteworks was marked with uncertainty. The MoD was faced with numerous conflicting priorities and needed convincing that a further commitment to the partnership would benefit defence. This placed a burden on Niteworks to show not only how it had added value in the past, but also, and much more importantly, how it could continue to do so in the future.

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There were many elements that continued to appeal to the MoD. Niteworks, a partnership in the truest sense, had brought together industry, the MoD and the armed forces to examine the challenges of NEC. Different organisations, each with differing values and objectives had delivered valuable and realistic options for the MoD.

Over 300 people had passed through Niteworks' doors and, regardless of their provenance, had cooperated closely on Themes as diverse as Joint Force Logistics and Unmanned Underwater Vehicles' role in Mine Countermeasures. Innovative commercial arrangements had been developed, allowing all partners to access the intellectual property generated within the Themes, whether or not they had contributed personnel and resources – reflecting the inclusive nature of Niteworks and why the industry partners valued their inclusion.

However, the original contract, termed the 'Assessment Phase', was, to some extent, an experiment in experimentation. It helped to eliminate the risks involved in developing a new kind of organisation, and original industrial partners, BAE Systems and QinetiQ, could well have ended up isolated with little support from their industry peers – ending Niteworks before it had a chance to prove its value.

Fortunately this did not happen and the progress made since 2003 had a reassuring effect. Niteworks had become a well-developed tool for MoD decision support. In addition, the reason its future had been questioned may well have been what saved Niteworks; in a challenging environment the MoD needed something to help it optimise defence spending.

Faced with this realisation, the MoD re-affirmed its commitment to the partnership and awarded a new contract, albeit with renewed focus, in December 2007.

With five years ahead of it, Niteworks' new business model has been mandated by its customer and it has been given three new areas of focus. The emphasis on NEC has diminished and instead it must now concentrate on providing evidence-based decision support to front-line operations, Joint Capability Board (JCB) decision-making and capability-based acquisition programmes – a recognition that the method was right but maybe the area of operations less so.

### A Valuable Capability

Its immediate future assured, Niteworks has a renewed vigour. Its value to MoD has been recognised as has the contribution it can make to the challenges the front line faces today and to the optimisation of the decisions of tomorrow. With this in mind, an exploration of why Niteworks is an asset to the MoD and the UK defence sector is timely.

Niteworks has demonstrated that it has the scope to be a flexible and responsive decision-support tool. It has addressed prioritised issues across the Defence Lines of Development (DLODs) and provided a measurable benefit to the defence sector. It has also delivered sizeable intangible value to UK defence, demonstrating that partnerships can work effectively and that both industry and the MoD are capable of embracing new concepts and commercial arrangements. More importantly, it has contributed to the protection of men and women on current operations.

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The partnership has played an important role in helping to de-risk NEC concepts and resolve system integration and interoperability issues. Along the way it has embraced best practice from across its membership and created a variety of tools from the tailored application of practical tests, architectural development, simulations, modelling and visualisations to man-in-the-loop warfighting experimentation. It has provided evidence-based decision support to address some of the major challenges facing the MoD and, through its thorough and rigorous processes, has dramatically improved the MoD's understanding of the effect its decisions will have.

In addition to the value it has added to the MoD, the industry partners' understanding of the MoD has grown. The presence

of serving armed forces personnel has also given industry a further insight into the challenges facing the front-line commands. This understanding, and empathy, is invaluable to industry, but the additional advantage of Niteworks is the opportunity it gives different individuals to work together, free from the organisational restraints their own companies may place on them in other partnering situations.

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Freedom from these constraints, and the vision and values encapsulated in the Niteworks' charter, have created a culture and set of behaviours unique in the defence sector and something of which the partnership should be justifiably proud.

#### **Obstacles Overcome**

It is this culture and these behaviours that have helped Niteworks overcome many of the obstacles it has faced through its development.

Of the 300 people who have passed through Niteworks, each has displayed the desire and ability to work together. This sense of cohesion reflects the behaviour of the partnership's core team and they have been instrumental in creating the same values in Niteworks' temporary members.

It is also a great credit to the core team that it has allowed the partnership to look beyond its short-term concerns about its future and focus on adapting its business model to meet the demands of the MoD customer.

#### **Challenges for the Future**

The new five-year contract has given Niteworks an opportunity to add more breadth to its output and look at alternative ways to support the MoD, but there are still challenges facing the partnership. If it wants to fulfil its new vision and 'serve defence as the definitive partnership providing decision support to enhance current and future military capability' then there are still some challenges.

The new business model is a dramatic change. Previously, Niteworks was funded entirely through the DAES<sup>2</sup> P9 line giving it great security but little scope for innovation or broader contact with other branches of the MoD. Now the partnership must add to the £43M of core funding by finding sponsor funding from across the MoD, engaging with Defence Equipment and Support (DE&S), the Equipment Capability Customer (ECC) and the front-line commands. If it wants to deliver strategic impact within a tactical funding mechanism, how can this be achieved?

There have also been criticisms in the past of Niteworks' tempo and pace of delivery. Not every potential customer is looking for the kind of solution a full Theme can offer. This has meant an evolution of the activities the partnership can offer, to allow customers to engage in a way that suits them and will enable Niteworks to deliver at increased tempo. Although they will still have a place in Niteworks' portfolio, the era of lengthy and comprehensive warfighting experiments may have passed. Instead, the partnership will need to respond with different, flexible and scalable offerings, designed to meet the budgets of its new customers.

The final challenge for Niteworks is to continue to convince the MoD, and potentially customers from other government departments and sectors, of its value and dispel any existing doubts that may remain about its utility.

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It must find its voice. Niteworks has perhaps been too passive an organisation, allowing itself to be directed rather than determining its own direction. If it can become more vocal about its achievements and what it can offer, it will be in a far stronger position to become 'the definitive partnership providing decision support to enhance current and future military capability'. ■

#### NOTES

<sup>1</sup> Defence White Paper, *Defence Industrial Strategy*, page 127, The Stationery Office, London, December 2005

<sup>2</sup> MoD's Directorate of Analysis, Experimentation and Simulation

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