

contention@rusi.org - The Debate: The Future of the UK Defence Industry

RELATIONSHIP PERFORMANCE IN UK DEFENCE PROCUREMENT

The Autumn 2004 *RUSI Defence Systems* provides some interesting and perceptive views concerning the UK Defence Procurement environment. Contributors discuss the Defence Industrial Policy and its competition v. protection question. Key Supplier Management is described as an organisational measure following on from the establishment of IPTs to improve the way MoD manages its suppliers. The need for cultural change that moves away from the traditional, adversarial approach to Defence Procurement relationships is also raised. The need to get on and make business relationships work better is

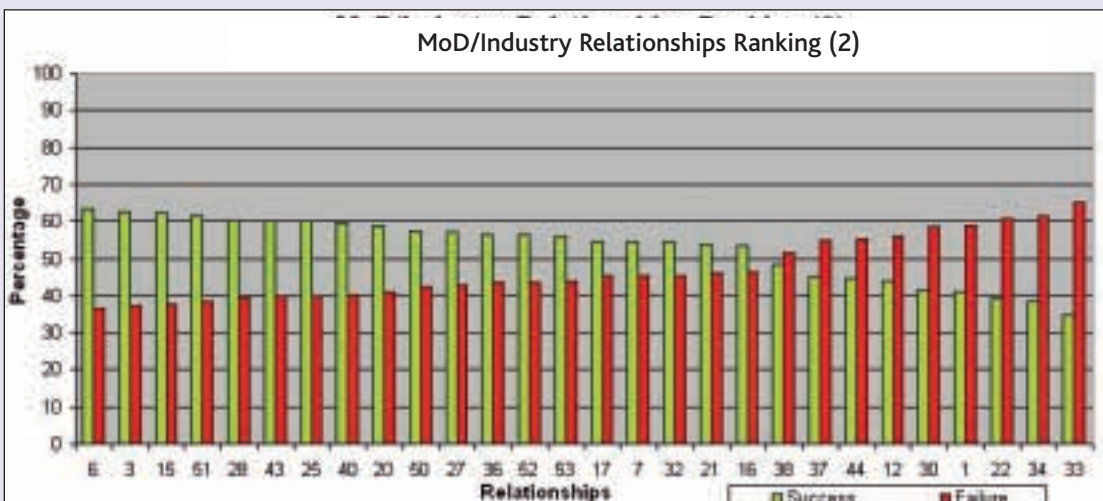
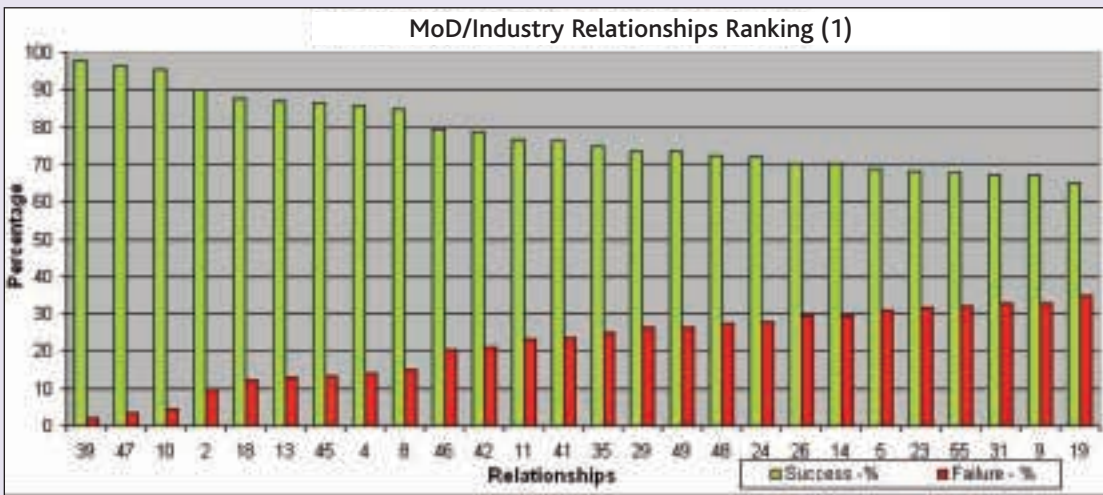
clearly expressed but practical advice is absent. Hence, I would like to contribute the concept of joint relationship management because at the end of the day, it 'takes two to tango' and it is important to know how well you are doing so you can jointly target corporate efforts on what still needs to be done.

It is all very well to concentrate on cost, time and quality when reviewing the performance of Smart Acquisition; these reveal symptoms rather than causes. I note some frustration is evident in previous NAO Major Project Reports on this issue. Whether an IPT is dealing with initial procurement or in-service support, project performance is strongly governed

by the effectiveness of its team-working with its industry partner. However, at the moment it is not possible to observe the entire portfolio of MoD/Industry relationships in an objective manner and see which are effective and which are not, and why. I consider that a full and objective understanding of these important matters is crucial if practical measures are to be adopted to improve performance.

In 2001/2, I carried out a substantial research project for Cranfield School of Management which examined 55 major IPT/Industry relationships across Sea, Land and Air systems. The exercise was valuable at the team level because in

each case it exposed, in a formal and systematic way, the operation of key relationship interactions such as communication, business processes and planning. In many cases this allowed the participants to expose problems for the first time and to address them in an unemotive way. At the strategic level, the results were interesting because they showed the relative performance of the entire portfolio of relationships and highlighted a number of generic issues that could be addressed to improve performance such as instability caused by high staff turnover, lack of formal performance reviews and the importance of properly incentivised framework contracts. The relationship rankings are shown graphically in the charts below. As can be seen, 77% of the relationships



examined were classed as successful (better than a 49% satisfaction score) which suggests that the overall picture is not as bad as popular opinion would suggest and that very good relationship practice existed in a number of IPT/Industry teams. However, the middle band from 50% to 65% tended to have settled into a 'staying together for the sake of the children' mode where average performance without 'spark' was the norm. The failing relationships were mainly the bigger, higher spending projects, which is a significant cause for concern.

Collaborative business relationships necessarily involve working in close proximity for long periods of time. If managers are not watchful, small issues can grow and generate a negative cycle that at best produces a mediocre relationship and at worst one that lacks co-operation and trust. On the other hand, a virtuous circle can ensure that 1+1=3 and customer focus based on innovation and high performance results. Objective measurement of joint relationship performance is thus an essential component of a strategy that seeks to bring about practical improvements in this vitally important but extremely problematic area. ■

Dr Andrew S. Humphries
CEO, SCCI Ltd

VALUE FOR MONEY AND OTHER FACTORS

Contributors to the debate on the future of the UK defence industry, initiated in the Autumn 2004 issue of *RUSI Defence Systems*, accepted the paramount need for the timely delivery of cost-effective equipment to the Armed Forces of the UK, but argued that MoD's acquisition decisions should also seek to obtain:

- Security of supply, through onshore technology, production and support
- Economic benefits to the UK
- Ongoing global competition

This debate parallels, and overlaps with, the broader controversy about the role of Government in the development of the national technology and industrial bases, the relative merits of 'laissez faire' and 'dirigiste' economic policies, and the extent to which market forces can be trusted to deliver the best outcome in various sectors of the national economy.

It would theoretically be possible to ensure that all the inputs required by the UK's Armed Forces could be obtained within its national boundary, but the cost of the necessary onshore facilities (to produce, for example, synthetic petroleum and a complete range of microchips) would be substantial. The cost might be even higher if all such facilities were owned and operated directly by the Government. This policy of self-sufficiency could involve stockpiles of foreign raw materials and spares, scaled to meet any foreseen crisis, but under Resource Accounting and Budgeting such stockpiles would attract depreciation and cost of capital charges. Complete security of supply for MoD would probably be unaffordable, or could be achieved only by unacceptable reductions in the scale of the Armed Forces. The debate must therefore move on to address the optimal balance between partial security of supply and value for money on individual defence projects.

Government expenditure within the UK on any goods and services (including those for MoD) tends to promote growth in the national economy, particularly in the regions where the expenditure is targeted. But the scale and duration of the increase in economic growth depends on the current macroeconomic condition of the national economy and on the nature of the Government's expenditure. Expenditure which promotes UK industrial capability in a large and growing world market is more likely to be beneficial than expenditure on goods and services which have few other customers. More research on the effects of defence expenditure on the UK economy in the 21st century is needed to inform this debate.

It would, of course, be undesirable for MoD and for many other customer

governments if a national or commercial monopoly were to dominate any key sector of the defence equipment market. But each individual customer, controlling only a few per cent of the world market, can have only a very limited influence on its evolution. The long-term development of the world market for defence equipment is more likely to be influenced by the collective policy of an alliance of small customers, as well as by the policy of the US Department of Defense.

It is understandable that every major acquisition decision by MoD is resolved within a storm of passionate lobbying from UK contractors and other interest groups which would suffer if the order were placed overseas. Special pleading is probably inevitable, but it would be less damaging if the MoD has established in discussions with industry and other stakeholders a consensual framework within which the cost-effectiveness of particular equipment options could be balanced against other considerations. Case-by-case decisions, based on who shouts loudest at the time, may be good politics, but are unlikely to yield the best long-term outcome for the UK's citizens. ■

Dr David Kirkpatrick
University College London

SECURITY OF SUPPLY

Human beings are tribal for two reasons – external and internal security: in other words, the Armed Forces and the Police. To rely, therefore, on external countries adds to the risk in both cases. For Defence we have little option in most cases – we do not expect to go to war alone. However, adding to the risk by relying on other countries to supply our equipment, as well as forces, requires special care.

The plus side can be higher technology and less cost. But as Francis Tusa says, '... new entrants will ... undercut UK firms ... and then establish monopoly positions ... as bad as, if not worse ...'

The minus side can be a collapse of UK defence industry followed, again as Tusa says, 'by a refusal to sell leading edge

technology, supply spares or develop UORs, by the foreign monopoly suppliers.'

The problem is compounded by our desire – quite correctly – to acquire Capability. This cannot be achieved without Capability metrics, which have to be developed by MoD and potential suppliers. Simplistically, we do not want to order 3 cubic metres of Underwater Capability and get 6 km/sec of C&D of Airspace because MoD and supplier were speaking different languages.

Finally we must speed up the whole process. Sir Jeremy Blackham noted that the QM2 took only five years from flash to bang. As the current head of Scrutiny and Analysis in the MoD quoted at the RUSI/DPA conference in January 2002: 'When you get the urge to predict the future, better lie down till the feeling goes away'.

Governments have little idea what their budgets will be in three years' time, so it is not sensible for MoD to spend so much time on plans more than three years in the future. ■

Dr Robin Miller

Associate of Aegis Technologies,
USA

THERE IS NOTHING WRONG WITH JIT

The recent article by Tom Foulkes in your Autumn edition on the application of Just-In-Time (JIT) techniques in defence, raises a number of interesting points.

It should be made clear that JIT is only one technique that has been adopted by industry and no industrialist would claim it is the panacea for all problems. A visit to any world-class facility would show that many techniques, not just JIT, are being used to eliminate waste.

Over the years JIT has been found to be especially valuable in the supply management of relatively low cost, short lead-time and low technical risk (i.e. stable in design) items. The application of JIT to these parts enables massive reduction in management overheads and increases stock

turnover considerably. This is not mutually exclusive to the objective of the military aim.

What must be made clear is that JIT or any other technique will never replace strategic, or war, stocks and the two must not be confused. Generally, industrial firms put a lot of effort into managing stock defined as 'strategic' (high cost, long lead, sole sourced, high technical risk).

The lead times for the procurement of many pieces of sophisticated military equipment, containing 'strategic' type items, are many years. To imply that failing to meet short notice demand is because of JIT techniques is simply not credible.

Likewise, the very nature of deployed/expeditionary-type military operations requires suitable levels of resources. If there are insufficient stores to sustain defined and planned operations then the application of JIT or other techniques is an irrelevant factor.

The argument that every deployed operation is different is not necessarily 100% true either, as it should be remembered that nothing is truly random and British forces have experience of operating in most parts of the world.

The issue of JIT being 'inherently vulnerable' to catastrophes is perhaps overstated. Any supply chain is clearly vulnerable to disruption. It can be argued that problems become apparent quicker under a JIT system, providing better 'early warning' to management.

Also, of course, one must remember that Urgent Operational Requirements (UORs) are, in fact, a form of JIT supply. The recent NAO report on UORs considers that, overall, the system works well.

A more significant factor than JIT, in the supply chain, is the MoD lack of corporate knowledge on reliability and maintainability data. If the MoD had this data, then industry could be contracted to develop improvements in availability and capability.

It is clear that just increasing the level of stock of piece parts does not necessarily increase availability, as there is normally nugatory work involved in removing and

replacing all the other interdependent parts in a sophisticated system.

This is borne out by the US General Accounting Office, where they looked at spares provisioning for both the Apache and Blackhawk. They found that increasing investment by \$331M for Blackhawk and Apache spares (an increase of 23% in the FY2003 budget for both aircraft) would increase overall readiness by only 2.6%.

Better Value For Money (VFM) and reduced Whole Life Costs can be achieved through increasing reliability and maintainability, by the establishment of proper partnering between the MoD and industry. This would enable much improved forward planning for the vast majority of operations.

It can be argued that MoD has strong predictability of demand but it is not formalised in the most usable manner. The Out of Service Date (OSD) for equipment is well established. However, often the procurement of the replacement equipment/system is late and, therefore, it is well known that the original OSD will slip to the right, but the system does not formally recognise this for long periods of time. This inherent delay in decision-making leaves industry at distinct disadvantage in managing the supply chain and does not constitute proper partnering. This is not the fault of JIT or Lean or any other industrial technique.

The good news is that the MoD is implementing the intelligent application of JIT through the establishment of 'pulse' line maintenance facilities for the Harrier, Sea King and other platforms. These have made significant inroads in taking out waste and reducing the maintenance throughput time.

This use of JIT, Lean, and other associated techniques, as described above, is proving beyond doubt the benefits that can be achieved within the military environment. Where JIT is well planned and executed, it is proving fundamental to improving front line military efficiency and effectiveness, which is where it really matters. ■

Andrew Cranfield
Director CMCL