



David Gould, the Deputy Chief Executive of the Defence Procurement Agency (DPA) looks at the impact of logistics transformation on the acquisition process

“**DPA** is all about the delivery of new military capability and the transformation of defence logistics is central to ‘DPA Forward’.

“Through-Life Management (TLM) is key to achieving this aim. We are moving away from the traditional equipment project of a long development cycle, complete re-design, re-engineering and re-manufacture of existing equipment to deliver new capabilities. This traditional process takes too long and is too expensive.

“More and more, changes in capability have to be inserted into projects quickly and the old linear way of delivery is giving way to a continuous loop. Increasingly, Through-Life improvements in support will not be delivered by a series of mid-life upgrades, but a continuous process. That’s how I see TLM; if you look after TLM, the Through-Life Costs will look after themselves.

“The biggest challenge for DPA is providing and sustaining a ‘premier league’ military capability. We want to be in coalition with the Americans on day one and to do that we need to be interoperable with their technology. Day one capability for really demanding warfare requires expensive and complex systems like Typhoon and the Type 45 Destroyer. At the same time, DPA has to be flexible enough to react to urgent operational requests, inserting capability quickly, or doing difficult stuff with electronic warfare.



“In this country, when we acquire stuff, we use it. The only other country which behaves like that is the USA and its budget is about ten times the size of ours, so we’re doing something immensely challenging on a tight budget. This means we need to be a lot smarter than most and that is the scale of the acquisition challenge.

“We also no longer acquire individual bits of equipment, but complete systems, and it is the electronics inside the tank, aircraft or ship that actually defines the future capability you are trying to deliver. That means you need to define the architecture of your combat management or battle-space management system right up front. This will allow you to upgrade it, support it and drive out obsolescence. We now have to think in terms of how to build a system that delivers capability, rather than a piece of equipment.

“Partnering is definitely the way forward, but to get the most from it, we need to be more transparent about our future plans, our budget and be more consistent in our decision making. This in turn, will increase investor confidence and give industry the confidence to transform with us.

“The way we currently partner with industry is not sustainable, so we need to give ourselves the best chance of influencing industry and incentivise them to take the right decisions about their future structure and to change the way they approach our needs.

“This is particularly important in maritime, as the warship industry is differently organised from the aerospace industry. You’ve got companies who develop and manufacture and different companies delivering in-service support. Also, we designed the capacity of the dockyards for a bigger and a less reliable fleet than we have today. This means that we have to be much smarter in our future maritime partnering arrangements and manage the capacity much better, Through-Life. ➤



David Gould

DPA Forward

DPA Forward is our strategy for improving performance so that we deliver effective military equipment to time and budget, thus meeting our targets.

DPA Forward will be implemented by re-invigorating Smart Acquisition through the improvement of current processes and the development of new ones.

“The Defence Industrial Strategy (DIS) will be critical in shaping our future relationship with industry and will allow us to meet the rapidly changing requirements for the armed forces, alongside industrial globalisation. Defence is an international industry; our requirement is not always unique to defence, and we need to take a more open stance to commercially available solutions. Implementing the DIS will also re-shape the relationship between DPA and DLO. Part of that is about how we initiate projects, because it’s an old truism that you set the cost of support when you start designing whatever it is you need to support.

“It’s absolutely crucial that DLO is involved at project initiation and we have a joint DLO/DPA sense of ownership. In the new circular project cycle, teams will move in and out of different parts of the acquisition cycle within the life of a single project or programme. The skills inside DLO/DPA IPTs will eventually become indistinguishable, with the same pool of people doing the work and, under these circumstances, collocation makes a lot of sense.

“To do this successfully, we need the right people with the right skills and this does not happen by accident, you have to plan it. In the Civil Service, we recruit some extremely bright people through various schemes, and we look after them well for the first two or three years, then we tend to lose track of them. If we want future team leaders with knowledge and experience of logistics as well as initial acquisition, we have to plan and manage their careers to achieve that. There is some good work going on to address the skills requirement of DPA and DLO, which is going to be increasingly similar and again, collocation will support this.

“It is an exciting time with some major capabilities on the horizon and some really challenging ones in the pipeline. We are making serious progress and I hope the following examples demonstrate the advances being made. ”



A DARING NEW SUPPORT SOLUTION

The Type 45 Anti-Air Warfare Destroyer support solution will be cutting edge and is required to achieve 70% availability over the ships’ 25 year life. Ground-breaking work will create the route map from the many elements of traditional maritime support to a future integrated *whole ship* support approach.

The support solution had to achieve a reduction in support costs of £10M per ship per year relative to Type 42; T45 will cost about the same per ship per year - affordability is a significant challenge.

Originally, support should have been provided on a whole ship basis by BAE Systems. However, scoping showed that no benefit would be gained by duplicating existing MOD support infrastructure, processes and organisations. In 2002, the support solution was amended to a *mixed economy* of in-house and contractor logistics support using existing DLO infrastructure.

IPTL Matt Roberts explains: “Recent innovations in support arrangements in DLO have demonstrated the cost benefit of contracting for availability at platform level. This has generated interest within DLO in a number of T45 support options and DG Log Fleet has engaged BAE Systems to ensure that the new approaches can be applied to T45.”

Cdr Ted Main, T45 Whole Life Support Manager said “The DLTP Maritime team arranged a series of workshops to pull together the stakeholder community and draw out the key issues, potential stumbling blocks and formulate the strategy.”

Now the route map has been drawn, work is developing in a number of areas.

- Work is proceeding with BAE Systems to develop support proposals for design authority and technical services. This work reports in Feb 06.

- The IPT is engaged with Procurement Reform (PR) category managers. Early indications suggest the benefit from PR is likely to be best achieved by combining T45 support requirements with those from other platforms through the Equipment IPTs.

- To maintain coherence with the Warship Support Modernisation Initiative, the IPT is partnering with Fleet Support Ltd, MBDA and BAE Systems to overcome challenges, share relevant financial data and develop work streams to look at engineering support, the Principle Anti-Aircraft Missile System support solution and looking at platforms in Portsmouth.

- Some in-service platforms have made progress with extending upkeep cycle intervals; the feasibility of doing the same for T45 is being investigated. Cdr Main added: “The use of Reliability Centred Maintenance, already incorporated for the larger equipment on the T45, will be used to inform the decision on upkeep cycles.”

This will start joining the many elements of supporting a complex and technically advanced platform. Matt Roberts says: “Support arrangements could migrate to a new form of contract. For example, on an availability basis either at equipment or platform level once a reliable basis for costing had been established.”

The business case for the new support solution will be ready by Jun 06 and once approved, the mobilisation phase will begin and a pilot support solution will start in 2008. The first T45 is HMS DARING.

WHIPPING UP A STORM ON TYPHOON SUPPORT

Air Vice-Marshal Barry Thornton, DG Log Strike, provides his thoughts on the introduction of Typhoon into service and the challenges facing the Typhoon IPT and industry partnering.

“Typhoon is the most ambitious, collaborative European military project of our age. The RAF is now training at RAF Coningsby with this next generation aircraft and there is increasing praise for the capability it offers. This is a demanding, ambitious and highly complex programme of delivery and the immediate challenge for the IPT is to provide support for Typhoon training and operational evaluation at home and abroad.

“Plans for Typhoon development and initial delivery have been influenced by the changing capability requirements of today’s threat and the adoption of the End-to-End, Forward and Depth logistics maintenance regime. We must also recognise the need to optimise the UK defence aviation business to meet changes in force structures.”

These have all been drivers for the IPT to review its plans for Typhoon support and incorporate emerging End-to-End principles; best practice from the legacy air platforms and from experience gained during the interim (Case White) logistics



A V M Barry Thornton

support to flying operations.

A joint IPT & industry team, supported by the DLTP, completed a six-month review to better understand what the Typhoon support solution needs to deliver, and how best to deliver it. *“This was an excellent example of all elements of a transformation team working together on one coherent, integrated programme in support of a major acquisition project,”* says Rob Shiels the Typhoon IPT Leader.

The first phase of work was a refinement of the support strategies for the major systems and components: identifying areas of overlap, aligning the support programme to operational assumptions, eliminating unnecessary

cost and also identifying any new areas for investment. Importantly, the review addressed the whole support solution, shifting emphasis from large individual procurement contracts towards outputs, ensuring that the IPT provides the support necessary to meet the requirement, but eliminating waste.

“This review has challenged established thinking. The outcome is an affordable support strategy that delivers all the operational requirements for Typhoon and provides a single focus on the Depth hub at RAF Coningsby. Typhoon is already establishing itself as a world beating aircraft with huge potential to deliver essential military capabilities, but these can only be realised if we can provide and sustain affordable, first class support,” says Rob Shiels.

The IPT’s future focus will be to design a Lean national support system incorporating the latest principles and emerging best practices. The IPT will also ensure that the UK is able to influence the quadrinational arrangements to optimise support costs and to grow the share of support controlled by the UK. These principles of ‘lean, lever and grow’ will be key to enabling a future, partnered, availability-based support solution.

As AVM Thornton explains: *“It should be no surprise that the introduction of a new generation platform, coupled with recent changes in the provision of logistics support, has caused us to re-think Typhoon support. It is almost impossible to have an accurate forecast of the cost of support, until we have experience of operating the aircraft. Already, unexpected arisings and other spares problems have caused unwelcome reductions in Typhoon availability at Coningsby. The IPT is making great progress in understanding the totality of this challenge, but crucial to successful implementation of Typhoon future support, is the collaboration between MOD and industry. All parties stand to win from lower costs and the*



export potential of Typhoon arising as a result of improved availability, capability and sustainability.”

Damian Halpin of BAE Systems echoes the sentiment: *“The success of Typhoon is central to the BAE Systems/MOD partnership. As the DLTP exercise has demonstrated, this can only be achieved through the close co-operative working of all stakeholders and BAE Systems is fully committed to the success of this programme.”*

The EJ200 engine which powers Typhoon is assembled by Rolls-Royce. Steve Spooner from Rolls-Royce says: *“The EJ200 is an essential part of our production activities for the next five years. Equally important is the manner in which the engine is supported, where partnering has enabled innovative support contracts to be established. The Rolls-Royce Mission Ready Management Solutions strategy aims to provide an enhanced level of support that meets customer requirements of availability and life-cycle cost.”*



Defence Logistics Transformation Programme (DLTP)

'Effectiveness Outcomes - Masterclass #2'

As the programme of logistics transformation matures from demonstration into delivery, emphasis has migrated from the delivery of efficiency in year one, to equal and increasing emphasis on the enabling and delivery of improved effectiveness in year two. This 'Masterclass' outlines the current and future effectiveness outcomes and related activities.

End user, front-line confidence: Our servicemen and women must be confident that they will get the right support at the right place, at the right time and to the right quality. We need...

- Through-Life optimised support solutions to deliver capabilities that allow us to operate with coalition partners at the highest level.
- Improved availability and reliability through 'contracting for availability'.
- Reduced repair times and improved management of war fighting assets.
- Improved Supply Chain (SC) performance to give confidence in delivery.

Improved force level readiness and sustainability: The expeditionary era requires us to configure our forces and logistics support for the most likely operational scenario – more frequent, smaller scale operations. We need...

- Better understanding of the readiness cycle with logistics support aligned to

the 'Prepare', 'Fight', 'Recover' and 'Recuperate' phases.

- In Land, Priming Equipment Packs (PEPs) are a major enabler of the 'Prepare' phase.
- Whole Fleet Management (WFM) to enable better use of the reduced Land vehicle fleet and support improved force generation.

Consistent and improved SC is a key enabler for improved logistics support and achieving 'confidence in logistics'.

This applies equally to the UK, NW Europe and operational theatres. We need...

- Better planning and demand based on 'theatre-pull' for logistics.
- A dedicated organisation to exercise command and control (C2).
- Lean to eliminate wasteful processes and ensure a seamless transition of materiel through the SC.
- Introduction of better and coherent logistics information systems, providing better visibility and management of assets in the SC.
- Introduction of a performance management regime to measure performance of the SC. A by-

product is a behavioural change in SC personnel to ensure targets are met.

Simplified End-to-End (E2E) processes – 'foxhole-to-factory': The whole logistics support process must be driven by what commanders and users in the field need to conduct operations. We are...

- Reducing unnecessary processes and infrastructure – from two Tornado propulsion facilities to one.
- Establishing single points of accountability – i.e. the creation of a permanent Joint Force Logistics Component (JFLogC) to provide a single focus for logistics support for deployed operations.
- More flexible logistics support through better information and shared situational awareness.

Logistics support optimised to enable Effects Based Operations (EBO). EBO focuses on the impact we can deliver, rather than the number of systems we need. If fewer modern platforms are needed to deliver the effects we require, we will need fewer people to operate and support them, and fewer bases. We are...

- Improving the capability of existing platforms and equipment and acquiring new ones with improved and multi-role capabilities. ➤



Defence Logistics Transformation Programme (DLTP)

'Effectiveness Outcomes - Masterclass #2'



- Employing new maintenance techniques (Reliability Centred Maintenance (RCM)), to reduce workloads, spares holdings and equipment downtime.
- RCM in the Royal Navy is well-advanced, having begun with the Hunt Class Mine Hunters in 1998. RCM is also being successfully applied in Land.

Improved platform reliability, availability and sustainability: To support EBO, equipment must be available to support deployment, reliable in the operating environment and we must be able to support and sustain it for the duration of the operation, including recovery and recuperation. We need...

- Emphasis on 'Contracting for Availability' and partnering with industry will ensure that equipment can be returned to service within agreed turnaround times, with increased capability and can be sustained.
- Greater collaboration between DPA, DLO and industry to ensure a better, shared understanding of MOD's needs and allow rapid upgrades and modifications.

Lean repair loops, improved turnaround times and reduced spares holdings: By looking at the process E2E, we can reduce the time taken for the whole repair process by planning for overhaul and return to the customer; reducing

the repair loop, its associated equipment and holdings.

- A joint LASS IPT and LSCIT project is helping the IPT improve Warrior support - saving around £7M over the next four years.

In 2006, the programme of logistics transformation enters a phase of programme 'consolidation'. The challenge will be to embed the transformational changes delivered so far and ensure that an institutionalised environment of logistics excellence prevails across all environments, E2E and Through-Life.

To enable the future singular Logistics Force envisaged by CDL's emergent Defence Logistics Programme (DLP), additional outcomes will be introduced and pursued by the DLTP:

Deliver transformational logistics activities in support of the DLP as a single process to...

- Improve confidence in logistics.
- Continue to deliver against mandated efficiency targets.
- Embed a performance management regime across defence logistics.

Embed E2E and Through-Life understanding and behaviours across defence logistics by...

- Continuing to apply and expand delivery levers: – Lean, Procurement Reform and RCM.

- Embedding closer working relationship between DLO/DPA in the initiation stages of projects to enable the delivery of optimum Through-Life support.
- Encourage IPTs to progress Through-Life maturity models for all equipment.

Embed the right skills in the right people across the new singular Logistics Force by...

- Sharing best practice between DLO, DPA and industry.
- Conducting Lean and Through-Life skills training.
- Improving logistics personnel management and career development.

Enable the transformation of industry to remove waste and understand the link between the order book and the operational outcome by...

- Delivering and implementing the Defence Industrial Strategy.
- Ensuring value for money for Defence and leverage industry gain-share opportunities.
- Collaborating with industry to reduce its waste and cost and maximise its profit, despite a reduced order book.

TRANSFORMING THE RELATIONSHIP WITH INDUSTRY

General Sir Kevin O'Donoghue, Chief of Defence Logistics (CDL), discussed with industry his vision to transform and improve the logistics support provided to the front-line at a recent BAE Systems workshop.



CDL

CDL explained that as the armed forces performs its duties both at home and abroad, his responsibility as logistics process owner for defence, was to deliver sustained, effective and efficient support. Integral to the delivery of this aim, is the strengthening and deepening of partnering relationships with industry. CDL says: *"It is essential that industry provides support to all phases of the readiness cycle: training and force generation, deployment and in-theatre training, conducting operations and recovery and recuperation."*

Although partnering agreements have proved successful, CDL emphasised that putting in place more availability-based contracts for key platforms and equipment was a high priority. *"I have been trying to refocus our attention on effectiveness. If you become more effective then you become more efficient. You can use that efficiency either to make savings or buy more effectiveness."* CDL concluded by reminding industry of the need to provide defence with confidence in industry's ability to deliver and to sustain its responsibilities in the new partnership era.

In response, Ian King BAE Systems Customer Solutions and Support (CS&S) Group Managing Director, announced the company's intention to mirror CDL's process owner role through the creation of a BAE Systems 'Support Council'. The

intention is to apply a more consistent and cohesive approach across BAE Systems, providing more effective support to the End-to-End logistics process.

Work to cement this new process owner relationship will be delivered across five DLO/CS&S partnership themes:

- Deepening understanding
- Building confidence
- Breeding and sharing best practice
- Close and committed working environment
- Identification of common processes

Joint delivery teams will address the transformational challenges and are sponsored by DLO two-stars and Business Unit Managing Directors. These teams will drive progress on current contracts and the development of support solutions for new programmes. The challenge will be to deliver joint MOD and industry transformation. This has to be achieved at best value for defence, whilst at the same time, delivering improved operational effect and allowing industry to make a profit, despite reducing workloads.



Ian King

DLO WINS PRESTIGIOUS PROCUREMENT AWARD

At the annual Supply Management Awards hosted by the Chartered Institute of Purchasing and Supply, the DLO won the Best Public Procurement Project. This is the UK's premier award, recognising excellence in the field of purchasing and supply management.

The Procurement Reform project is the largest public sector procurement programme in Europe, delivering benefits to the DLO of over £40m, with 28 Category Management Teams now launched, and over 32,000 hours of professional procurement training delivered.

Mark Pedlingham, DG Log Procurement said: *"I am delighted by the recognition of the hard work of so many people, with particular thanks to the IT/IS Category Management Team upon whose excellent work the submission was based. The award from such a professional body shows significant acknowledgement of the quality of work we are doing, which is highly valued by the department."*

The case for the Best Public Procurement Project used, as an example, the experience of the IT/IS Category Management Team in DCSA.

By introducing a new organisational structure with new procurement strategies, systems and skills, the team has delivered over £26m savings across MOD in less than two years, exceeding its target five years

ahead of schedule. The team has also successfully transformed the way it works with the rest of MOD, while the success of the IT/IS Category Management Team underlines what Procurement Reform has achieved.

Dick Reeve, the IT/IS Deputy Category Management Team Leader said: *"It's great that the hard work of the team has been recognised. Especially as they drove through implementation, delivery of the significant savings and formulated new wider and deeper initiatives such as total cost of ownership and other government department marketing after the source plan was produced. With the top level support the whole team has received in recognition of this award, we are set to achieve even more."*

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