

Intellect Paper for Capability Manager (Information Superiority)

The industry vision of TLM

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Background

Intellect is the UK trade association for the IT, telecoms and electronics industries. Its members account for over 80% of these markets and include blue-chip multinationals as well as early stage technology companies. These industries together generate around 10% of UK GDP and 15% of UK trade. Intellect is a vital source of knowledge and expertise on all aspects of the technology industry.

The following paper provides the views of the Intellect Defence Briefing Group on an issue raised during a workshop session with Capability Manager (Information Superiority) in February 2008.

Introduction

Intellect considers the implementation of a true through life approach to be a vital building block in the modernisation of UK defence capability and processes, and welcomes this opportunity to offer industry's input.

Following the aforementioned workshop, Intellect undertook to produce this paper in order to present industry's vision of TLM. To consolidate and substantiate the workshop discussion, written feedback was sought from members.

Intellect's members are cognizant of a number of MoD programmes underway in this area including – for example – initiatives around capability development, procurement change and supply chain management. The vision outlined in this paper is intended to be comprehensive, incorporating all relevant aspects of through life capability management (TLM) including some which may already be the subject of change programmes. The paper does not assess or prejudge the work of these initiatives, and no inference should be drawn as to industry's view of their progress.

In order to present a comprehensive picture of industry's vision for TLM, the paper is inclusive rather than exclusive. Whilst CM(IS) and related colleagues will be well versed in some of the arguments contained herein, the paper errs on the side of caution in terms of reader knowledge, to ensure that the vision is fully articulated for other stakeholders either in Government or industry.

Summary

Intellect believes that TLM is a vital part of future UK Defence, including the delivery of Network Enabled Capability, because it enables a more agile requirement and procurement process which looks across services and Lines of Development. The establishment of the strategic TLM building blocks and engagements outlined in this paper would be welcomed by industry as a clear signal of MoD's commitment to a long term approach.

Industry's vision of TLM has four key characteristics: capability focus, transparency, flexible commercial approaches, and appropriate leadership and programme management. All of these characteristics are underpinned by a culture and an engagement in which open, honest and dependable dialogue ensures that MoD, industry and end users are able to confidently bring their experiences and skills to bear on a common task. A range of tools are available to managers, customers and suppliers to ensure that capability plans and progress are clear and jointly understood.

Capability focus

In this vision, capability is delivered by flexible and joined up MoD structures, using a cohesive approach to strategic challenges of integration and programme/portfolio management. Programmes and projects are focused on developing "downwards" from the capability need, rather than being derived "upwards" from prejudged equipment, platform or single service priorities. MoD and industry structures are based on the delivery of capability through life, and

on maintaining affordability. This implies and requires a rapid movement of resources, vital to dynamically addressing operational and management needs.

In each case, TLMC is achieved through the maintenance of a set of coherent strategies for the relevant programmes (including their relevant DLODs) which both plan for and adapt to the overall capability being developed. Management and budgetary factors are considered within this overall approach. A set of simple “TLMC Principles” are employed throughout to ensure a consistent approach to through life management and maintain focus on end-to-end issues.

Cross-cutting the capability strategies, a coherent technical strategy is utilised which works across MoD, industry and wider Government boundaries. This strategy enables technology refresh and insertion to reflect the speed of technology development in the market, but to be initiated by an MoD which has a thorough understanding of the art of the possible.

The definition process for a capability need includes the end user (e.g. front line commands). In the development phase, capability investigations are scoped to include all the Defence Lines of Development (DLODs), and include within their remit their effect and dependency on suppliers, including services suppliers.

Capabilities will include an appropriate degree of technical openness to facilitate rapid and incremental technology refresh/insertion, and will be supported by commercial and IPR approaches which appropriately incentivise suppliers without unfairly “locking in” specific vendors.

Transparency

The mature engagement between MoD and industry rests upon a base of shared understanding across a programme, creating a common awareness of strategic needs and integration challenges as well as management issues around the project’s shape and practical boundaries. This enables both sides to have realistic expectations and to scope their work to fit the art of the possible. This “TLMC culture”, where disclosure is the norm, robustly supports joint endeavors enabled by an integrated and cohesive programme.

Shared vision

MoD, industry and other partners have a clear awareness of the capability vision, including drivers and dependencies, and this enables the utilisation of through life planning from the outset. Flowing from this, a common acquisition picture is employed for each capability as it moves forward, providing a “single version of the truth” for all stakeholders.

Assumptions

The assumptions which the customer is using are visible throughout the process, starting with a clear set of scenario assumptions projected over the long timeframes which are required for some capabilities. A shared core set of assumptions, based on reliable data, drive decision making on the project throughout life.

This core set includes assumptions around:

- the required life of the capability
- funding & funding profile
- dependencies
- project or programme boundaries
- supply chain structure
- trade space (at both URD and SRD levels)
- levels of interoperability required
- availability of and access to the necessary GFI/GFE
- dialogue across TLMC/TLMP and industry planning

Whilst all business assumptions – and especially those in defence and security – are prone to sudden change and event-driven turbulence, the ripples from necessary shifts in assumptions

are mitigated by the transparency which enables customer and supplier to understand the full capability picture.

Budget

Transparent, realistic financial management ensures that resources and proposals can be closely aligned, and that expectations and relationships are built on pragmatism rather than optimism.

Industry and MoD share transparent and effectively communicated budgets, as well as a clear assessment of cost drivers in each capability area and DLOD, to give all stakeholders a holistic picture which incorporates:

- new equipment procurement
- likely technology refresh/insertion
- training
- support
- private financing (including PFI/PPP)
- logistics
- replacement/wear & tear
- other capability costs across the DLODs.

Stability in the defence programme is thus supported by a clear and common understanding of funding and the funding profile, which is modeled dynamically against capability metrics to ensure that abrupt short term wrenches are rare. Where adjustments need to be made, decisions can be taken on a strategic level with a full understanding of the long term capability impacts of financial changes.

Financial transparency results in significantly reduced risk and cost for industry, which can plan its capability development and project engagement on an appropriate basis, and present a thorough picture of its value-add and competitive advantages. MoD in turn benefits from decreased procurement costs and timescales, as well as a clear understanding of where investment will most effectively produce capability (or where decreased investment will result in potential capability loss).

Risk

A common risk perspective (based on best practice) is deployed, balancing commercial and implementation type risks against operational risks for each capability. A strategic risk perspective is also established, aggregating capability risks into an integrated overall picture which informs capability trading.

Risk plans for each capability are shared with industry, so that joint identification of options and analysis of their impact on coherence, individual programmes and across DLODs is enabled as part of change management and assessment. Business risk for industry is considered within this risk envelope, recognizing:

- the effects on dependant capabilities
- the consequences for overall capability strategy
- commercial impacts
- the relationship between timing adjustments and the economics of production
- supply chain management issues
- the impact on the common technical strategy

Commercial Flexibility

As a result of the strategic focus and high level of transparency, informed capability trading is relatively commonplace in MoD business, and the process is underpinned by flexible financial approaches designed to support as well as develop capability.

This encourages low-cost technology insertion, close collaboration and continual improvement, driven by a sharing of risk and reward and incentivised by the use of common success criteria.

Industry is therefore able to invest with confidence, and to innovate based on a secure understanding of likely marketability.

A range of commercial approaches is used by intelligent, unified, customers who are integrated into the overall capability strategy. These approaches range from partnering to contracting for capability to off-the-shelf competition, and have sufficient agility to allow incremental development of capability.

Consideration of suitable acquisition approaches is part of the capability planning process, and draws on a thorough market and technology knowledge base. Throughout, innovation is incentivised throughout the supply chain, and the dual- and re-use of capabilities from theatre and other industries is an integral part of development.

The suitability (or otherwise) of capability for export is considered during the development of acquisition approaches, especially on projects which use international standards because of the need to interoperate with allies.

Leadership & programme management

The strategic capability focus and the TLMC culture are given support and structure by good leadership, which is based on the application of programme management best practice and informed by a transparent and quantifiable overall capability view.

Stability

Key roles and figures in the capability development team are stable, leading to predictability and confidence in the decision making process and the defence programme. Over the long term, this enables effective planning at a strategic level in MoD and industry, with benefits including the enhancement of defence capability, improved procurement timescales and costs (for all parties), the retention of industrial capability and expertise and sustainable shareholder value.

Continuous evaluation

The development of robust methods to measure capability, cost and time (as discussed below) supports ongoing evaluation and the dynamic assessment of overall capability which informs sound decision making – including in capability trading.

From both a contemporary management perspective and in hindsight, a process of continuous evaluation demonstrates an evidenced and timely approach to decision-making, with integrated scrutiny, and drives an incremental approach to the management of capability and risk.

Tools & Mechanisms

Industry's vision of TLMC is enabled by a number of tools and mechanisms which enable transparency and drive appropriate behaviours:

- At an early stage, measurable capability "characteristics" are defined which are visible to industry
- Capability can therefore be measured throughout against time and cost, and the impact of changes in procurement process or technology during development can be assessed
- These common metrics allow the measurement of DLOD performance across capability areas and thus enable the development of a consistent set of DLOD maturity metrics
- A common taxonomy is used across MoD and industry which enables transparency and the establishment of common processes and metrics. This taxonomy includes clear definitions of, for example, "capability" and "programme".
- Best practice quality management tools and measures are employed and made transparent, so that MoD and industry have a common understanding of e.g. what a good Through Life Management Plan looks like, and the measures which will be used.

- Project management is cross-linked to overall capability strategies, and to portfolio analysis techniques, using common language and common data sets across MoD and across different DLODs.
- Shared business processes are created and tightly defined, to ensure all stakeholders have clear sight of each others' business requirements and associated imperatives.
- Capability research and technology, training and competency structures are joint and co-ordinated across the portfolio
- A TLMC-based CADMID process uses, for example, frequent Gates at low approval levels to support incremental delivery, spiral development and capability insertion.

This TLMC toolkit essentially describes the interdependencies between and captures the full impact of decisions across all capability. This process is underpinned by credible and knowledgeable technical scrutiny which is mindful of the overall strategic capability view.

Engagement

Dialogue between MoD and industry is continuous throughout the life of a capability. Joint requirement and programme reviews, shackled to a transparent set of shared assumptions and a common vision, enables a partnering culture with as few surprises as possible.

This engagement also broadens the potential market base, creating opportunities for mid-tier and SME companies, but also providing a stimulus for industry collaboration and sourcing of capability from international or non-defence sectors. This wider supply base is able to understand and inform the TLMC decision making process, drawing on knowledge of common and best practice approaches which have been employed.

Engagement with other stakeholders – including Front Line Commands, service experts and non-EP DLODs – brings further stability, as a common view of drivers and costs is developed and cross-DLOD factors are incorporated into the analysis.

Conclusion

Industry's vision of TLMC is drawn from experience of both best and less than best practice, and reflects above all else the need for engagement and transparency between MoD and industry, and for collaboration within Government and within industry.

As in many change programmes, the improvement of critical enabling mechanisms and the development of appropriate skills, culture and leadership are vital to the success of TLMC. Unique to defence, however, are the many challenges generated by the particular nature of military "business", and the difficult balance of maintaining crucial day-to-day capability whilst reforming the outdated parts of MoD's legacy needs to be carefully managed.

Intellect is keen to help MoD harness the energies and skills of the UK defence community, in order to improve Government and industry effectiveness and efficiency. Intellect would welcome further opportunities to work with MoD and develop through life capability management, as a means of offering greater support and capability to the front line.