Defence Lines of Development analysis with MODAF

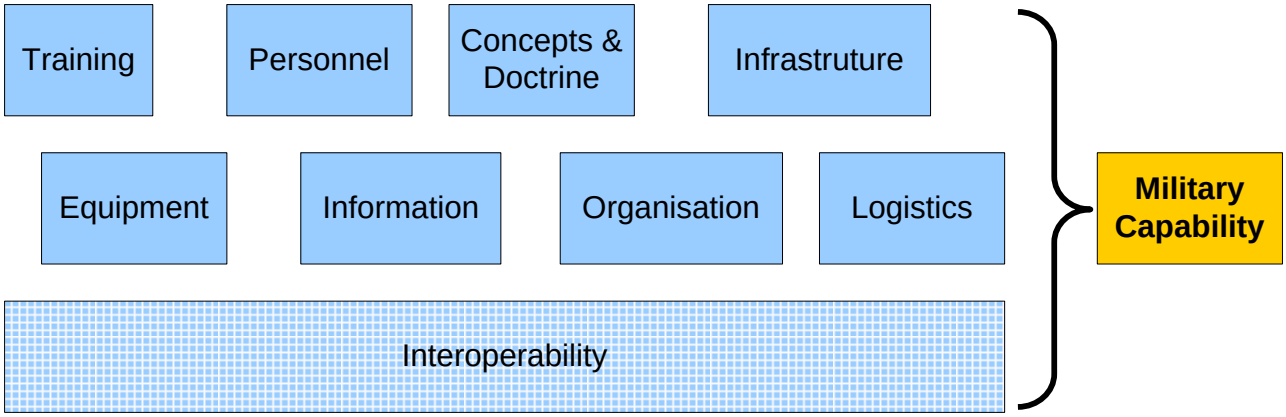
This article will illustrate the use of MODAF with reference to common challenges for capability integration based on analysis of the Defence Lines of Development DLODs).

Within MOD, the DLODs provide a mechanism for co-ordinating the parallel development of different aspects of capability that need to be brought together to create a real military capability:

- Training.
- Equipment.
- Personnel.
- Information.
- Concepts & Doctrine.
- Organisation.
- Infrastructure.
- Logistics (ie Sustainability).

Interoperability is regarded as an overarching theme.

The co-ordination of the DLODs is sometimes referred to as Capability Integration. This is illustrated in the diagram below.



Improving framework support to the DLODs has been one driver for the evolution of MODAF from just being concerned with the Equipment line (like the original DoDAF-based framework).

The first observation is that the Information LOD has been addressed within MODAF: information within the Operational Viewpoint is addressed through a related suite of views (OV-2, OV-3, OV-5, OV-7) and the same is true for data within the System Viewpoint (SV-1, SV-4, SV-6, SV-11).

The second observation is that in addition to the Equipment LOD, the Training and Logistics LODs probably merit full architecture development in their own right. This is because the full appreciation of these DLODs in capability terms will involve understanding a combination of process, information and people.

The area that has received most attention in the changes leading to the current baseline have focused on the features of MODAF relating to the human element of capability. Specifically:

- Within the operational viewpoint, it is possible to model types of organisations and individual posts within an organisation; it is also possible to model the roles to which these posts may be assigned and define the functional responsibilities of those roles.
- Types of organisation and post are collectively referred to as 'organisational resources' within MODAF.
- An organisational resource that has responsibility for the performance of an activity or set of activities is known as the process owner; an organisational resource having such a responsibility must have the competence to undertake that role
- Within the system viewpoint, the focus is on the human roles that contribute to a capability configuration (that is a combination of elements that in combination fulfil an operational requirement)
- Some roles (operator roles) directly operate systems; a distinction is now made in MODAF between system functions and manual functions
- An organisational resource undertaking an operator role must have a competence to perform the associated manual functions.

These changes are intended to make it easier to specify the solution required at different levels of abstraction. The organisation LOD is covered by these changes.

Using capability configurations alone, it is possible to specify a solution capability in terms of the overall functions that are needed without specifying the human contribution to the delivery of those functions. This would apply to the early stages of procurement using a capability-based procurement approach. Such an approach enables the exploration of new organisational structures as part of the solution space so that there may be genuine trade-off between manual and automated functions.

The competencies referred to above will provide an input to training analyses. Among other things, such analyses will look at the gap between the actual and required competencies in formulating options for training. Competencies relate directly to the Personnel LOD.

The remaining DLODs are addressed by MODAF as follows:

- The Infrastructure LOD primarily relates to facilities; the concept of the 'physical asset' that is introduced into MODAF at this baseline has been defined in such a way as to cover both physical platforms (eg tanks or aircraft) and facilities (eg the Land System Reference Centre), the defining characteristic of a physical asset being that systems can be deployed to it
- The role of Concepts & Doctrine within MODAF is reinforced through of the logical nature of Nodes in the current baseline; there are increased opportunities to capture operational concepts within MODAF operational views. For example, low level concepts may be captured as business rules in OV-6a.