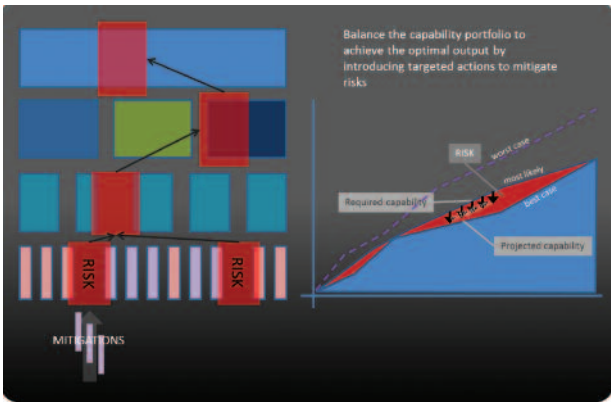
Managing risk in complex military capability

The modern military world has evolved rapidly in response to the diverse demands of conflict prevention, crisis management and combat operations, and the need to balance capability against cost, efficiency and value for money. Furthermore, the evolving nature of the cyber threat has, in many cases, reduced acquisition cycle times to minutes rather than years. MooD software is being used to aid effective decision making and increase efficiency in the complex world of defence capability management, exploiting the value of a dynamic interactive model to ensure that risk is exposed and investment is continually focused in critical areas to achieve optimal performance against prevailing need.

The scale of the problem

The fast pace of military technology innovation is further underlining the need for responsiveness, agility and integrity in the capability domain. Such dramatic changes in the defence landscape are driving the need for improved coherence, increased decision cycle times, and forcing a far greater focus on dynamic and connected information.



The real requirement is to deliver the ability to understand risk in real-time while balancing investments across the wider portfolio so as to meet current and planned capability need.

The lexicon of capability has become the default mechanism for describing and measuring output; looking at what military tasks a force is capable of delivering and at what level of maturity the capabilities exist.

Capability gap, risk & complexity

The gap between the required maturity of capability and the projected maturity is represented by risk – risk that the capability won't be available on-time, risk that it won't be delivered to budget, risk that it won't achieve the required level of performance. These risks form a 'common currency' that can be traded to balance the portfolio and hence achieve the best achievable outcome. Under this view of risk as a currency, the interventions, or actions for improvement, are the mitigations: the activities that will eliminate the risk or reduce its impact.

As with other complex environments, the military world comprises a large number of diverse components that together contribute to the creation, sustainment and operation of capability. The interactions between these components, also referred to as the "Defence Lines of Development", shift and move as the portfolio of risks, mitigations and opportunities unfold.

This paints a very complex picture with many moving parts, many competing dimensions and any number of factors influencing performance. Understanding the network of contributions that these moving parts have on capability achievement is the key to taming the complexity and enabling effective and efficient decisions to continually tune supply to demand.

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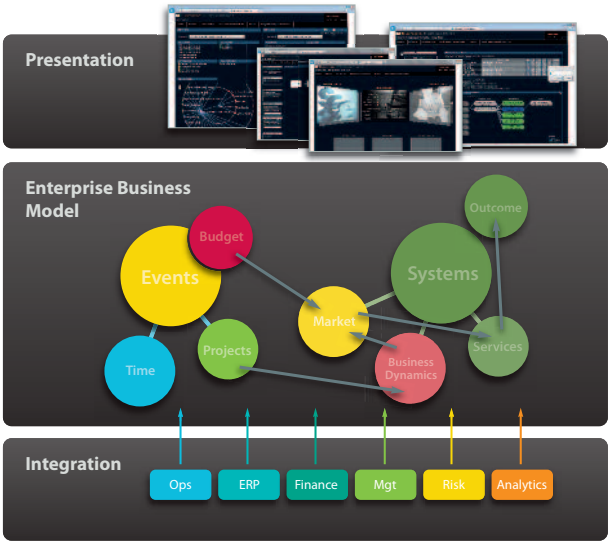
Supporting decision making under complexity

Supporting decision making against this degree of complexity demands powerful abstractions by which decision makers can focus on the balance of outcomes that are needed, with confidence that the implications of the various underlying connections can be managed.



MooD International achieves this through the concept of an Enterprise Business Model, essentially a map of the capability network. This describes the capability contributions and connections involved and present decision makers with visually meaningful representations of options.

As with many large organisations, performance related information is fragmented across an array of systems that record performance at the level of, for example, a capital investment project, a training exercise or a recruitment drive. By bringing this information together and aligning it with the capability network, it is possible to expose the real impact of risk on capability output and identify gaps in the committed plan.

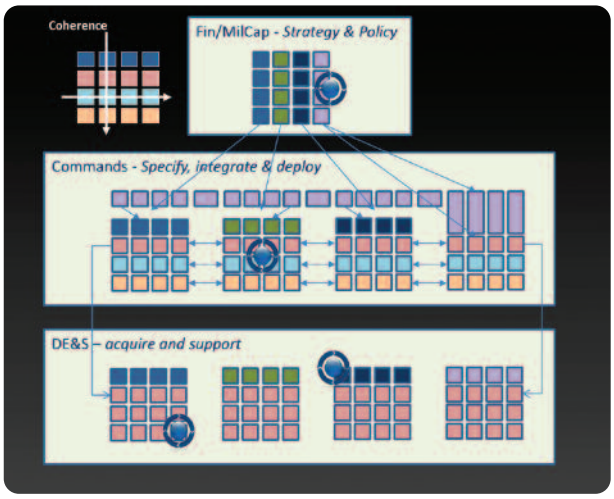
Critically, the model expresses the dependencies between the moving parts, dependencies which can range from being relatively simple and linear through to being complex and fluid, with a multiplicity of interconnections.

Bringing the model to life

The model becomes an increasingly valuable asset when the rich information it contains is exposed through series of interactions that enable senior decision makers to identify critical areas of risk, to isolate gaps in the plan and pinpoint opportunities for mitigation. These interactions, when captured and modelled in MooD, allow executives to test and evaluate alternative configurations and scenarios before committing to a specific course of action.

The model is capable of operating and delivering value at multiple levels. Accordingly, MooD International has derived a simple hierarchy of portfolios designed to deliver the required output at each level, as illustrated in the figure.

- The 'defence' portfolio operates at the Strategy & Policy level of defence.
- The 'capability' portfolio defines the disciplines of the Front-Line Commands and the integration of activities to form and sustain capability.
- The 'activity' portfolio represents the various threads or Lines of Development that form the individual components of capability.



Understanding the interconnections and dependencies between these portfolios is critical to achieving the required balance at each level.

Delivered through the MooD software, the capability model and the portfolio structure together drive a critical control environment for military decision makers: a means by which the organisation can take control of its performance, understand the risks and balance of investment to deliver the best possible outcomes against the ever evolving requirements of conflict prevention, crisis management and combat operations.

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