

From Product Assessment to Service Solutions

**The changing role of industry and
consultancies in military OR**

The general environment

Mid 1980s

- 2 global super powers
- Cold War led to a stable planning environment
 - Known enemy
 - Known battlefield
- Over 300,000 regular service personnel in UK Armed Forces
- A PC in every office
 - CORDA had just 2 IBM PCs
- Bespoke software, long development time
- MOD had money to spend
- Focus on Campaign Outcomes

Late 2000s

- 1 global super power
- Expeditionary Warfare & “War on Terror”
 - 2 active theatres
 - Asymmetric warfare
- Under 200,000 regular service personnel in UK Armed Forces
- A PC on every desk
 - Every member of CORDA has a laptop plus specialised PCs
- Powerful, easy to use software available to everyone
- MOD strapped for cash
- Understanding Outputs

Industry and OA in the early to mid 1980s

- **Within the MOD:**
 - a large number of OA organisations and a shortage of analysts and modellers
 - increased demand for OA studies
 - Increased demand for new models and support for existing models
 - Money to spend
- **The ‘OA Industry’**
 - In the 1970s growth of ‘software houses’ that provided the bespoke simulation models and tools for the MOD OA organisations
 - These moved into the new business opportunities by providing OA study teams and modelling support teams
 - Continued to meet the demand for new models
 - Small specialist companies covering areas such as Risk and Cost
- **‘Big Industry’**
 - Had its own OA teams
 - System Assessment, performance, effectiveness focussed
 - Some scepticism within the MOD

Examples of CORDA 1980s projects

Project Foresight

- A future battlespace study looking at equipment issues 10 years out
- Linked up low-level models with high-level campaign models
- CORDA had a lead role of integrating the work and co-ordinating the efforts of various industry parties
- Lots of reports, but no visibility of the impact

Shallow Water ASW & LFAS Studies

- Contracted study programmes
- Developed methodology, models, undertook analysis
- Presented the study results
- Helped to cancel the Continental Shelf Mine
- Contributed to the evolution of LFAS into Sonar 2087

Examples of CORDA 1980s projects (2)

Fleet Operational Analysis Section Support Contract

- Support to the Front Line
- Tool Development – Semi-Automatic Reconstruction Facility
- Exercise Reconstruction and Analysis
- On site analysis and modelling support
- (Support to Northern Ireland)

Assistant Chief Scientific Advisor (Capability) Support

- NATO and Russian Naval ORBATS for the Net Assessment Unit
- Eurofighter COEIA methodology development
- Hercules Rolling Replacement Programme (Tranche 1)
- US fighter export policy
- Scenario development for UK/Russian war games

Where are we now in 2008?

Within the MOD

- OA largely concentrated in Dstl
- OA studies largely undertaken 'in-house' by Dstl
- Front line support, Iraq & Afghanistan, provided by Dstl
- Costs and OA more integrated (COEIA)

The 'OA Industry'

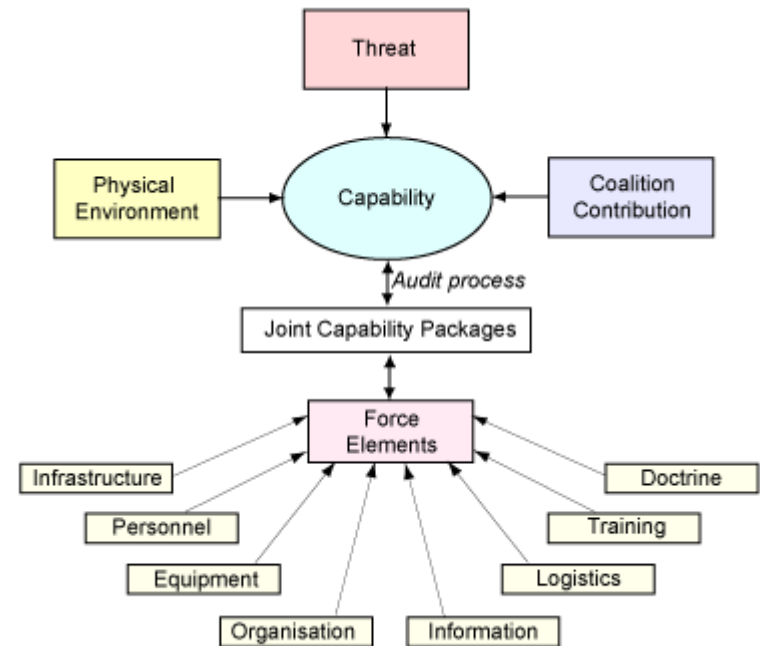
- The medium sized OA companies have left the 'software house' culture and are embedded in engineering companies
- Support to IPTs in DE&S
- Small OA companies provide people into Dstl studies

'Big Industry'

- BAES employs more people than the RN and RAF put together, turnover nearly half the MOD DEL
- Perhaps the most significant change is here
- Both in MOD's requirements and Industry's response

MOD and Industry

- Achieve success in the military tasks we undertake at home and abroad.
 - 1
 - 2
- Be ready to respond to the tasks that might arise.
 - 3 **Generate forces** which can be deployed, **sustained** and recovered at the scales of effort required to meet the Government's strategic objectives.
 - 4
 - 5 Recruit, **train**, motivate and retain sufficient military personnel to provide the military capability necessary to meet the Government's strategic objectives.
- Build for the future.
 - 6 Deliver the **equipment programme** to cost and time.



New Contracting Demands and “B & SM”

New contracting demands and issues

- Service Provision
- Contracting for Availability and Fleet Management
- Platform transition
- Training solutions
- TLCM and DIS

BAES developed B&SM to meet the demand for new types of analysis

B&SM is

- The application existing skills in new business environments
 - Hard OR techniques
 - Soft Facilitation techniques
 - Schedule planning, risks, and costs
- Financial and economic modelling extended to cover commercial issues
- Integration of OR, economic and financial modelling and analysis to optimise solutions that deliver customer value and business value

What is B & SM used for?

B&SM provides managers with a range of analysis techniques which enable them to see the potential impact of business decisions, before those decisions are taken.

B&SM is used in the Concept and Assessment Phases to:

- Inform 'trade offs' early and optimise solutions/proposals
- Establish increased understanding of projected 'through life' operational performance, costs and risks
- Identify key Value Propositions and Drivers
- Establish appropriate commercial contracting mechanisms
- Establish MOD and BAES confidence in the proposed delivery solution

In Through Life Delivery to:

- Improve predictability and forecasting of future performance against KPIs
- Continuous improvement of solution/service offerings
- Reduce the level of risk through improved decision making

Summary of Changes

For the MOD

- Consolidation of OA organisations – Dstl is all pervasive
- Bringing back in house the conduct of OA studies
- Wider governance of OA

For the 'OA Industry'

- Absorption into an engineering culture and becoming part of a wider 'engineering support offering'
- Change of customer to DE&S, IPTs etc
- For the smaller companies – body-shopping and tool development

For 'Big Industry'

- Development of new analysis processes
- Large increase in people deploying these process
- Moving towards 'trusted partner'

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