

Joint Workshop

Theme: “Value for Money and Complex Decisions”

Tuesday 19th November 2019
The BAWA Centre, Filton, Bristol, BS34 7RG

The Defence Special Interest Group (DSIG) of the Operational Research (OR) society and the Society for Cost Analysis and Forecasting (SCAF) are holding a joint workshop to explore the synergies between the two organisations member.

It is critical when conducting options analysis to consider not just the cheapest alternative, or the most capability, but the solution that provides value for money (VfM). Defence organisations around the world are challenged with technologically advanced, hasty, complex decisions that often seem to be difficult to resolve. However, through the consideration of the financial implications and the benefits offered by the options the SCAF and OR DSIG membership offer recommendations for decision makers to consider.

In isolation the cost and capability are interesting; when combined the investment appraisal (IA) and associate measure of effectiveness (MOE) for the options can make a compelling case!

The **Society for Cost Analysis and Forecasting** was formed in September 1984 following a recognition of the need for a forum where those with interests and experience in cost analysis could meet and discuss problems and techniques.

The formation was the initiative of the UK members of the International Society of Parametric Analysts with the support of the Ministry of Defence and The Royal Aeronautical Society. Due to the background and experience of the founder members, the Society has tended towards defence oriented industries, however, it is the intention to cover as broad a field as possible.

The objects of the Society are to promote the best interests of its members and to improve and disseminate knowledge of cost analysis and forecasting methods. SCAF is a not-for-profit organisation and has no political affiliations or commercial bias but encourages sponsorship by organisations with declared mutual interest.

The aim of the **Operational Research (OR) Society Defence Special interest Group (DSIG)** is directed towards the practical and theoretical development of Defence related OR and the promotion of a wider knowledge and appreciation of Defence related OR.

The group also seeks to encourage interaction between Defence related and non-Defence related OR. The group was formed in 1997 to provide a ‘home’ for all those involved in Defence related OR: customers and suppliers, practitioners and academics should be involved both as talkers and listeners. Meetings are held to consider both techniques, and wider discussion of the role of OR in Defence.

The group holds meetings two or three times a year and has strong links with the International Symposium on Military Operational Research (ISMOR).

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09.15 - Registration and Coffee

10.00: - Welcome and Opening Remarks – Rajagopal Sanathanan, SCAF Chairman, Alan Robinson, OR Society DSIG

10.15: - Keynote address - Gavin Jessup, (D Scrutiny) ,Ministry of Defence - MOD’s Approach to Investment Decisions (MAID) and its implications for analysts.

10:45 “Optimism Bias in Defence Equipment Projects” - Luke Heley and Andrew Crossley , MoD, Defence Economics

There is a proven tendency for appraisers to be too optimistic in forecasting key project parameters such as cost and schedule when constructing a Business Case. The HMT Green Book explicitly calls for adjustments to be made to appraisals to factor in this observed optimism; however, the current approach to this is based on a cross-government sample of projects that is not necessarily representative of Defence equipment procurement. This piece of work from Defence Economics draws on historical data to provide a bespoke evidence base for levels of optimism bias in MOD equipment projects.

11.40 “Proactive Obsolescence Management - can money really be saved and risk mitigated?” Ian Blackman, Chief Technical Officer, International Institute of Obsolescence Management

For many years Obsolescence practitioners have told us that being proactive will save you money and help in cost avoidance. However, there are many companies who prefer to be reactive to issues and deal with issues as they occur. Many modern support contracts include contracting for availability where the bidder does not get paid if an obsolescence issue causes a program delay or stoppage. This presentation will discuss how different resolution strategies impact on programme direct cost as well as the secondary and consequential costs from making that choice. Examples will be from multiple industry sectors.

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12.20 - “What about the ‘F’ in SCAF” - Andy Nicholls, Consultant, VMZ Parametrics Ltd

The paper will examine past, present and future thoughts on the prediction of medium and long term projects and their technologies. I believe this would make an ideal starting point and generate discussion aided by other predictive presentations.

13.00 Lunch

13:40 “Survey feedback from SCAF Sept Conference – Is it possible to achieve vfm in Defence” – George Lyon, TP Group

13.50 “What Does Value-for-Money mean for NATO capability development?” – Tom Baldwin, NATO, ACT

In 2019, NATO will spend approximately €700m of common funds on the development and acquisition of capabilities that are beyond the national defence requirements of individual member countries. How does NATO ensure that these programmes deliver value-for-money? What does value-for-money mean within this Alliance context?

This presentation will describe the principles of NATO common funding, explore what value-for-money means within the Alliance and outline NATO’s historical challenges in achieving this through the delivery of capability development projects. An overview will be provided of NATO’s new Common Funded Capability Delivery Model and a discussion held on its potential impact upon capability development and achieving value-for-money, using example NATO programmes.

14.25 “A prediction model for the Cost per Flying Hour (CPFH)” - Michail Bozoudis - NATO Communications and Information Agency -Senior Cost Professional

“This presentation describes the quest of aircraft performance and technical characteristics that drive the Cost per Flying Hour (CPFH). The regression methodology, sample, candidate cost drivers, and findings of the analysis are presented and discussed. A complex Cost Estimating Relationship (CER), consisting of the engine’s specific fuel consumption and aircraft empty weight, is opted and tested on known systems”

15.05 Tea

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15.20 “Canadian Coastguard – Value for Money through Vessel Life Extension”
David Jones, QinetiQ, TL Operational Analysis and Strategic Consulting.

This presentation describes how QinetiQ used Linear Programming (LP) to assess the capability of the Canadian Coastguard (CCG) fleet through to the year 2060, and how this assessment helped inform their Fleet Renewal Program. In order to bridge any gaps between vessels going out of service and the achievable rate of replacement, Vessel Life Extension (VLE) options were considered. QinetiQ assessed a range of VLE options for 20 different vessels, individually and in combination, and used the LP to produce cost-effectiveness data for each.

16.00 “Panel Session – “Value for Money and Complex Decisions – How can the OR and Cost Communities work better together to ensure we make vfm decisions? ”

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Your questions will be collected throughout the day and the panel will debate these and other from the floor.

16.45 Close
