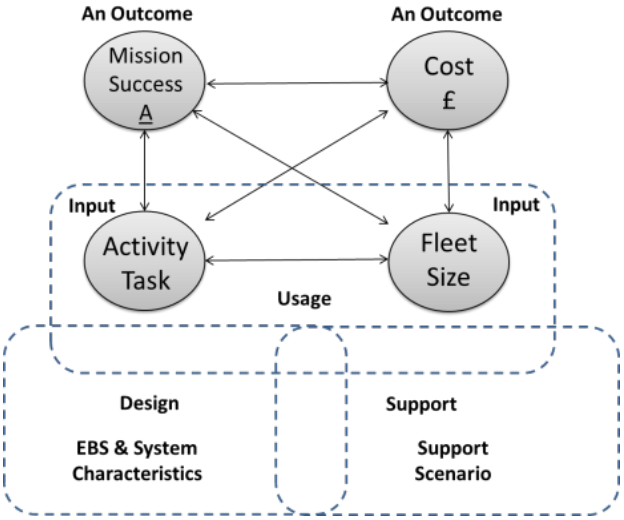
Q. Are you Struggling with your Support Strategy?
A. TFD will provide a Service using our proprietary tool suite

Are you struggling with:

- Defining the optimum Support Strategy?
- Feel that your Support Strategy could be better, but don't know how to form and test your ideas?
- Persuading your organization to change the support strategy?
- Don't want to make a large investment in tools until you are sure of the return?
- Or haven't got time to buy and learn how to use the tools?

STOP struggling!
TFD Group can solve these problems quickly and economically using our tool suite



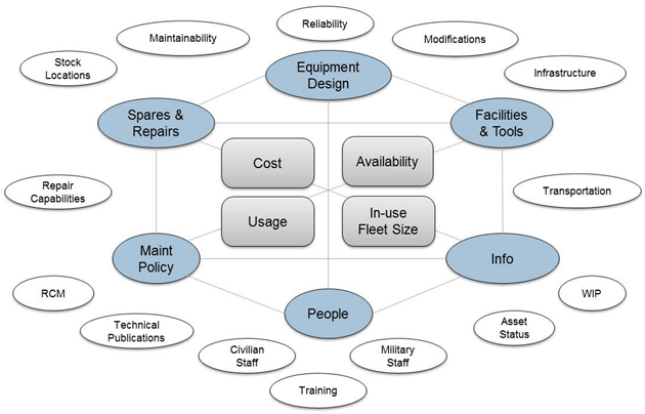
Deciding the optimum Support Strategy for a defense system is a complex business and is getting harder as customers demand "more, with less". It must take account of the system architecture, how it is used and how it is supported. These three elements interact to define, in practice, the effectiveness and efficiency of a given fleet size in providing operational capability, mission success or availability at a cost.

Support plans often prove to be sub-optimal in practice because equipment characteristics such as Reliability and Maintainability are different in reality, the systems may be used differently, and support performance often does not turn out as planned. This creates significant risk leading to poor availability, increased system cost and inadequate military capability.

While ideally the system, the activity level and the usage pattern could be adapted, in practice these are often fixed. Capability planners will always be reluctant to cut activity levels and will press the supportability community to do better seeing improvements in the support system as the only palatable opportunity. Indeed, the Support Strategy will have a significant impact on the size of the active fleet required for training and, to a lesser degree, for operations.

To address these issues, the Mission of an Integrated Logistic Support Manager must be to:

Plan, implement and improve through-life the effective support of a system to meet the required tasks, while seeking efficiencies to balance more output, with fewer systems at lower cost.



This definition captures the central need to deliver equipment availability, affordably for a required usage of an optimum in-use fleet. Any trade-offs are influenced by the main ILS functions, illustrated in blue, which in turn are defined by the outer ring of techniques, knowledge and detailed activities.

How then can a Support Strategy be optimized?

TFD Group has an activity-based logistics resource supportability and analysis modelling tool called ***MAAP***. A ***MAAP*** model defines in detail when, where and why specific costs were incurred, to allow exploration of the linkages, interactions and outcome of potential changes to the input factors in dynamic operating profiles. It provides a flexible means of understanding the 'cost atoms' which, when aggregated, define the entire support system, when and where it is used and maintained, by whom, using what resources, at what cost, and what they deliver for system availability and task achieved.***MAAP*** is able to address multiple systems, at multiple maintenance levels over changing multiple year scenarios and considers all the support resources needed; manpower, skills, tools, test equipment, facilities, transportation and spares. ***MAAP*** also has an associated utility suite, ***mPOWER***, with 3 specific capabilities:

- **mBOSS (**MAAP Budget Optimized System Support) to optimize the Support System against a constrained budget.
- **mPIRIC (**MAAP Progressive Investment in Reliability Improvement Candidates) to identify the maintenance events that are the cost and availability drivers.
- **mBRACE (**MAAP Budget Response to Avoid Capability Erosion) to assess an existing Support System to suggest the actions that could be taken to reduce cost while minimizing the effect on system availability.

The ***MAAP*** suite allows Support Managers to develop a robust model of their environment in which to assess the support implications of alternative scenarios. It provides the means of addressing 7 challenges and tasks which typically face them:

- Periodic re-optimization of support resources.
- Options analysis to reduce costs while minimizing loss of capability.
- Continuous improvement reviews of options to improve availability, reduce the in-use fleet size, or reduce future costs.
- Supportability impact assessment of options to deploy partial fleets on operations while maintaining training.
- Supportability impact of task surge requirements.
- Supportability impact assessment of major fleet programs.
- Contribute to cross-platform assessments of shared level of repair and supportability analysis.

Together ***MAAP*** and ***mPOWER*** provide the capability for Support Managers to explore these challenges and provide answer through output reports. This level of understanding will empower Support Managers to take actions – to pull the levers – to plan and manage their systems more effectively and efficiently.

In a recent Case Study, a major European Defense customer wanted to review its overall maintenance policy for 2 categories of equipment for its armored vehicles: the power packs, engines and gearboxes; and electronics such as radios, data systems and optical sights. The task was not to conduct a detailed Level of Repair Policy for each item in isolation, but to take a broader view of the optimum support strategy. Should generic repair capabilities be provided for field deployment in order to improve system availability and reduce overall cost by shortening repair loops, minimizing the cost of stockholdings and, significantly for deployed operations, lowering the burden on expensive and scarce transportation pipelines, especially by air?

Using a ***MAAP*** model in a representative scenario, TFD was able to show conclusively that the Support Strategy of forward repair which they had adopted as doctrine for many years, was still true. While looking at each item in isolation, as might be expected by equipment Project Teams and their OEMs, justified a policy of return to the OEMs for repair, assessing all the items together showed that sharing the cost of creating and using generic repair assets in the field was considerably cheaper and more effective.

In sum, Support Managers should build and maintain a current baseline model of their system but, all too often, it is not available to them. But faced with an urgent need to make decisions, Support Managers do not believe they have the time available nor the capacity to explore the market, buy sophisticated tools, learn to use them, gather data, build models and conduct the analysis. Understandably perhaps, they turn to their prime suppliers for advice which they are unable to validate other than by judgement. It seems to be the only solution.

The alternative is to use people who are skilled and experienced experts in supportability analysis, who understand how to gather relevant data, and who bring powerful tools which have been validated and verified by the UK MOD. The answer is to turn to TFD who will provide the answer as a service.

STILL Struggling?