



Defence White Paper

Allocate DefenceSuite



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1 Executive Summary – DefenceSuite

DefenceSuite offers a comprehensive Information Management and Exploitation system. Designed to work with existing legacy databases it offers the most cost effective solution to bringing information together across all lines of development¹ to enable clear understanding of the relationships between activity, resource requirements and costs. It also allows for scenario modelling against defence planning assumptions and simplifies the ability to understand the resource and cost implications of the various scenarios. The key element of DefenceSuite is its ability to apply an interactive timeline across all of its components; allowing users to understand the full implications to changes in activity across defence assumptions and all lines of development.

DefenceSuite is built around a number of discrete components which can be applied individually or together, depending on customer need. For instance, a customer may have a pressing need to simplify HR or manpower planning, but subsequently wish to link that HR data to force generation or training activity data. Defence Suite allows the customer to do this seamlessly, enabling evolutionary and cost effective exploitation of existing data. The Defence Suite components are outlined right:

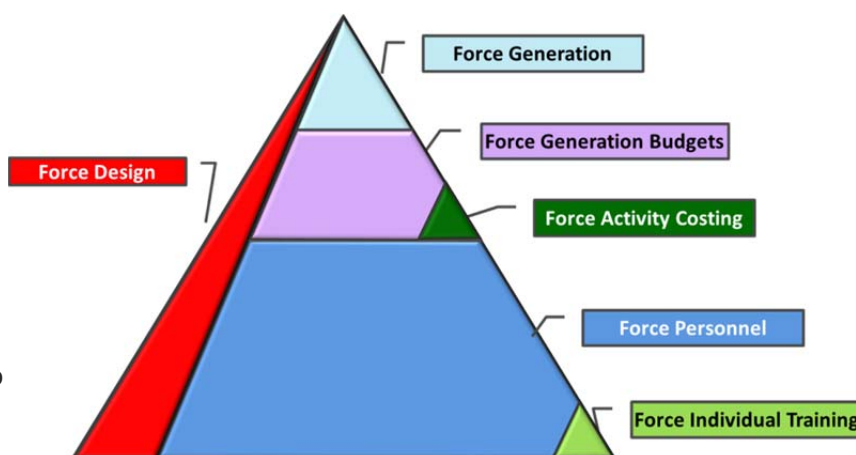


Figure 1 – DefenceSuite Components

Force Design is always applied to existing data in order to establish a structural hierarchy upon which to exploit data – the remaining DefenceSuite elements are then added as required. A complete DefenceSuite installation will therefore allow the user to manage and exploit data across all of the following areas:

¹ Manpower Equipment Training and Sustainability data is very often kept in legacy databases.

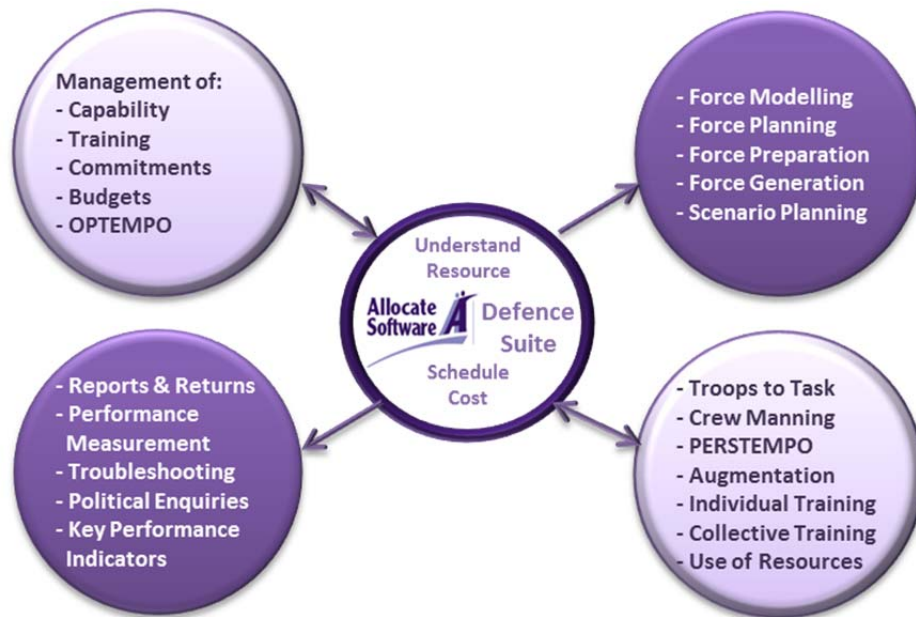


Figure 2 – DefenceSuite - A truly holistic system

DefenceSuite is in service with the UK and Australian Armed Forces and with NATO’s Allied Command Operations (ACO) and SOF HQs. Designed to enhance significantly Information Management and Information Exploitation, it is platform agnostic and web based – specifically to allow it to operate with legacy systems. It is tailored to be used by those elements of uniformed services (civilian or military) that are facing complex capability management situations based on a plethora of different data storage solutions such as multiple spreadsheets and/or a number of ad hoc disparate, incongruent and disconnected Management Information Systems. The outcome for the user is straightforward – the ability to understand, resource, schedule and cost complex elements of capability, quickly, efficiently and flexibly.

“Working constantly under sustained pressure and often against the clock, PJHQ and the Front Line Commands will benefit enormously from DefenceSuite as it will enable full and predictive Capability Management; Everything from Force Planning & Modelling, through to Force Preparation and Force Generation/Recovery – with the ability to measure both performance and value for money”

Major General Andrew Pringle, President, International Government, Defence and Support Services, Kellogg Brown & Root and formerly Chief of Staff/Director of Operations, UK Permanent Joint Headquarters.

2 Part One - The Capabilities

2.1 SUITE OF CAPABILITIES: UNDERSTANDING, FORECASTING, RESOURCING AND COSTING

2.1.1 Allocate Software's DefenceSuite

DefenceSuite enables the four significant capabilities of **Understand**, **Forecast**, **Resource** and **Cost** – all within a collaborative environment that seeks to input data only once, but use it many times. The Capabilities are delivered by three applications that between them provide a comprehensive and holistic system enabling commanders to make better decisions about how best to manage current and future capability across uniformed services.

The future character of conflict and increasingly complex demands of first responders and homeland security agencies is likely to place a premium on Information Superiority through Information Management and Exploitation. Specific capabilities such as Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR), global nation building and response to agile and elusive threats demand sophisticated training and management to ensure operating personnel retain their edge. It also reinforces the notion that highly trained and equipped personnel will continue to be the winning factor in such environments and their aftermaths. These individuals will need to be highly capable and motivated with specialist skills and critically will also need the agility, training and education to operate effectively in an increasingly complex environment. This will all need to be achieved against a context of much more efficient use of budgets. DefenceSuite is designed today to deliver those efficient capabilities now and tomorrow.

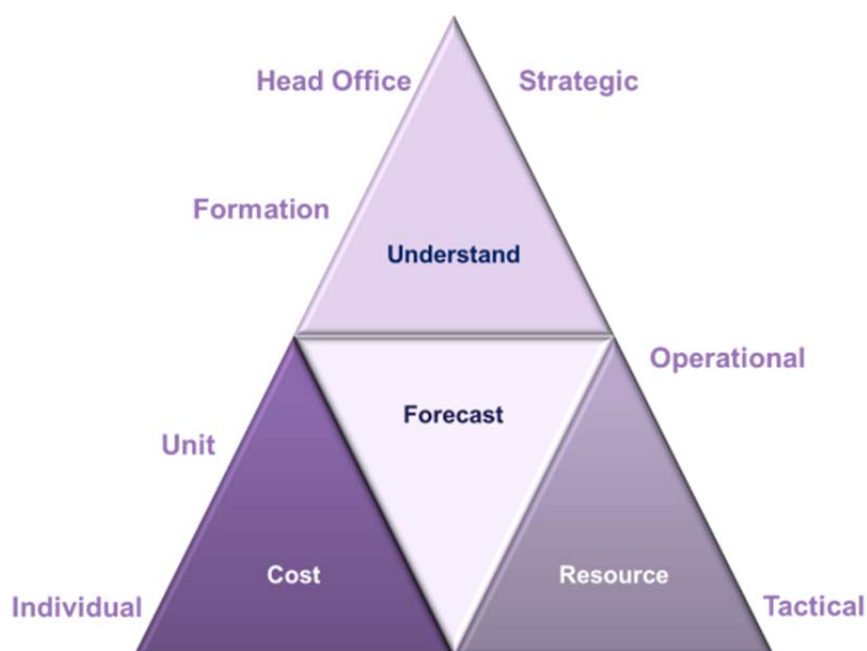


Figure 3 – The Information Challenge across the Force Structure

2.1.2 Capability Management

Together, the four elements (**Understand, Forecast, Resource** and **Cost**) work as a system which enables the complete Capability Management of uniformed services from Force Planning and Modelling, through to Force Preparation and Force Generation/Recovery. Figure 4 below shows how this can be achieved in a single holistic system running off just one database; therefore working with one version of the truth.

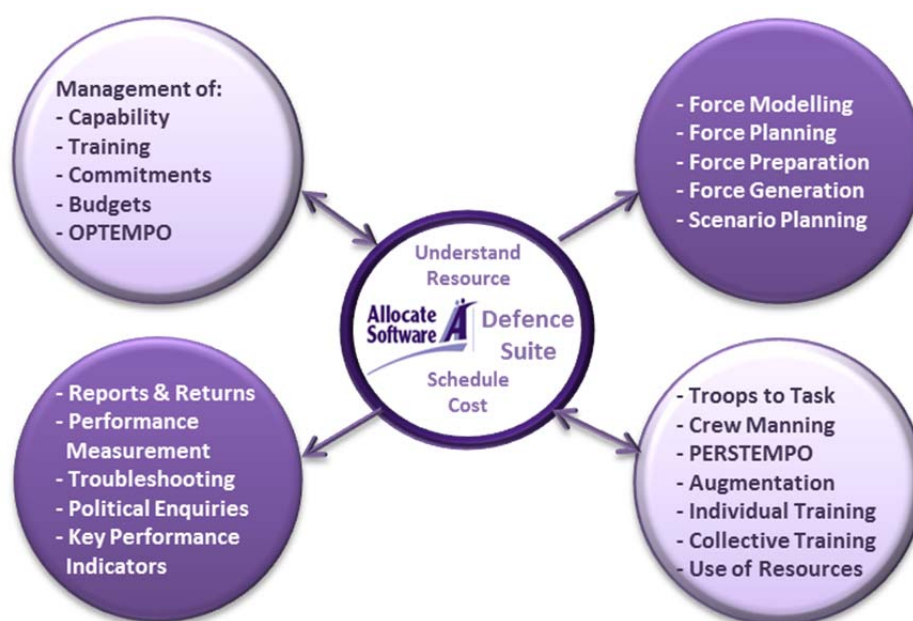


Figure 4 – DefenceSuite - A truly holistic system

2.1.3 DefenceSuite

DefenceSuite is a rich Information Exploitation application used to support the time based management of capability and commitments (including both operations and training). It is able to hold the complete force hierarchy and all the Force Elements within the force structure and track changes to that structure over time including the alternative command hierarchies such as OPCOM and ADMINCON etc. It offers a mix of understanding and scheduling capabilities which enhance the utility of existing data, offering improved Information Management and Exploitation capabilities.

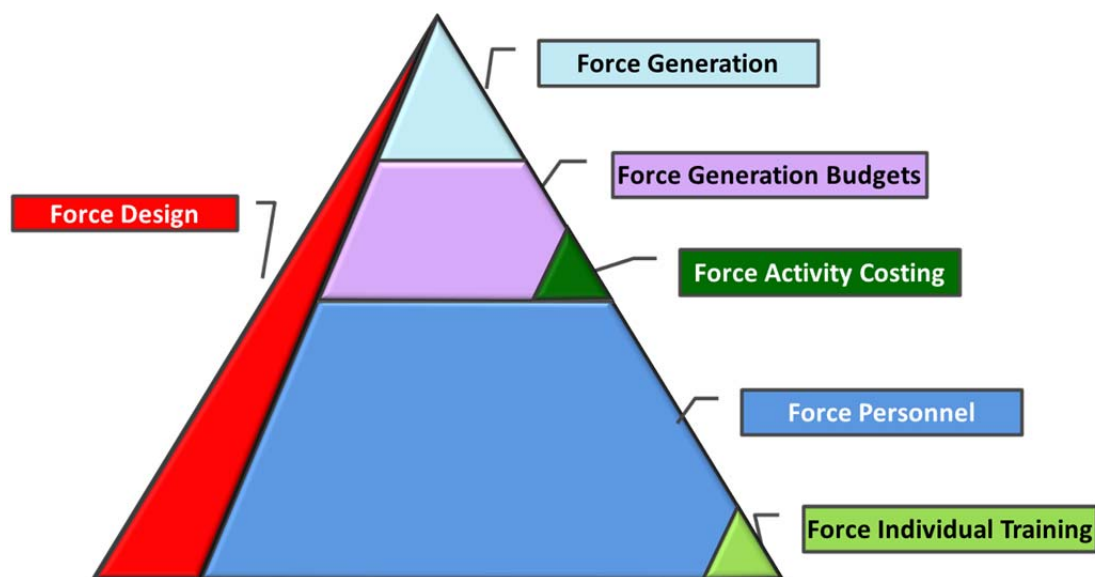


Figure 5 – DefenceSuite - Components

DefenceSuite Components. DefenceSuite comprises a series of components that enable users to tailor the system to their requirements and expand capability as circumstances demand. As shown in Figure 5, Force Design provides the backbone to the system enabling the remaining applications to be added as required. This modular approach allows users to realise benefits early in the delivery programme and to shape any subsequent customisation to meet their needs precisely. Consequently it offers a most effective means of acquisition and implementation.

2.1.4 DefenceSuite Capabilities

Predictive Capability Management. DefenceSuite features a Gantt chart diary view. Through just a simple click, drag and drop of the timeline, it is possible to set a date in the past, present or future. This instantly allows the user to view the force structures on that date, the established posts within the force structure on that date, which posts are to be filled and what individual skills personnel require.² In addition, the simple click, drag and drop of the timeline allows the user to view what collective competences the Force Elements, within the force structure, will have achieved on that date, what key battle-winning equipment is assigned and the list of assigned missions. This gives a holistic view of every aspect of future force structures from future formation Mission Essential Tasks, through to individual skills required to be held by personnel in future posts, in other words predictive and proactive Capability Management.

Force Finder. In the same way that future structures are tracked over time, DefenceSuite also plots all commitments, from training to operations, down to the precise detail of each and every component of the operational requirement for any planned, contingent, or short notice crisis response operation. The unique, intelligent selection Force Finder search engine then rapidly matches potential Force Elements to the future operational requirements. It assesses all critical requirements and where the match is imperfect it highlights all the factors to be considered in an impact statement – thereby enabling decision superiority and/or remedial training if time permits.

² Skills or Competences can be those that will be acquired on assumed successful conclusion of planned training or competences that have already been acquired and are valid for a designated period.

2.1.5 Information Management

There is a rich Information Management application that provides the ability to manage all items of data relating to the Career Management of individuals and individual training. Individual event planning and administration allows users to manage the complete training life cycle of all personnel. The Information Management application allows for the complete end-to-end process from setting up individual training courses and events and generating Joining Instructions to recording actual attendance and confirming any pay increments arising from competences and skills that are gained. The unique Trouble Shooter identifies predicted shortfalls in skills needed to meet operational objectives and identifies potential risk mitigation strategies with their associated costs – or predictive and proactive Risk Management.

2.1.6 Event Management & Budgeting

A web-based Event Management & Budgeting application enables Management and Exploitation of data to allow Force wide fully collaborative scheduling, application and costing of all resources consumed during individual and collective training events³. Users can create, edit and manage training events, detail participants and platforms, allocate resources and generate event templates all from the web. Paperwork and messages, such as joining instructions, associated with training events can be generated automatically. Individual and collective training events can be planned lesson by lesson or outcome by outcome, results measured and outputs, including costs quantified. This enables the progress of individuals, collective components of Force Elements (Ship's Divisions, Companies/Squadrons and below etc.) and Force Elements themselves to be tracked through the events. Activity is therefore explicitly linked to Resource consumption and cost enabling an accurate model of total capability cost to be generated.

DefenceSuite minimizes duplication by re-using data at every occasion giving a single view of the truth. All data can be presented through an easy-to-view 'traffic light' display. It can also be used to track the employment and cost of resources used for operations. This facilitates better in-year budget management, proactive and predictive budget forecasting and empirically analyses whether best Value for Money is being achieved in training for operations and readiness. Ultimately, the aggregated output can be used to understand the total cost of capability generation at every level. It has been said that it is the glue that holds the various information systems together by providing a dashboard-view to commanders and presenting them with their critical Business Intelligence requirements, thus enabling them to justify their resource allocation, or persuasively argue their case.

³ Resources are tracked for all events that consume resources, not just training activity, so recruiting or publicity events can be managed too. In its current conformation this does not include operations because security considerations require exclusion from the internet. There is, however, no reason why a separate version could not operate in a classified domain.

2.2 DEFENCESUITE AND STATIC HUMAN RESOURCE DATA

2.2.1 Personnel Management

While DefenceSuite can easily handle all aspects of static HR Data such as personnel details, administration, assignments, HR management and allowances (e.g. those that are available through Oracle, SAP and PeopleSoft), it is focused on the more challenging aspects of full, predictive and proactive Capability Management. It puts the human skills and competences that are a key component of capability at the forefront of collaborative planning. It is designed to ensure that their cumulative and collective skills efficiently contribute to the fighting power of their Force Element or platform.

2.2.2 Release of Static Data

DefenceSuite manages the evolving force structures at the strategic level, tracks changes to establishments and posts over time and simultaneously models alternative courses of action at the operational level. To achieve this, and where appropriate, it can draw on static HR data through two-way interfaces, in order to inform the higher-level processes associated with managing capability. In effect releasing the locked-in static data to the information and knowledge environment to improve decision making.

2.2.3 Predictive and Proactive Capability Management

Predictive and proactive Capability Management means handling the full spectrum of functions from Force Planning, through Force Preparation to Force Generation, Sustainment and Recovery. Being able to conduct this activity predictatively and in a proactive fashion is as simple as a click, drag and a drop of the unique timeline. Commanders and staff can quickly see the capabilities required, the training shortfalls in available forces, the remedial action required with associated costs.

An example of the DefenceSuite user interface showing operations and shortfall analysis is provided in the Figure below:

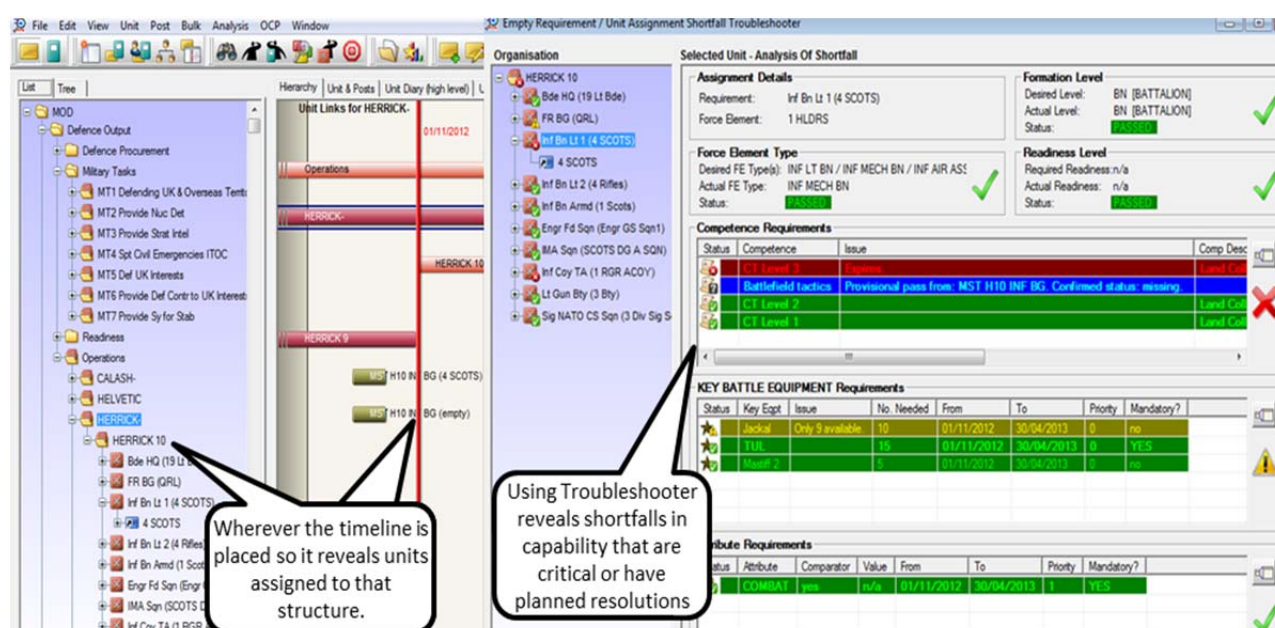


Figure 6 – The Timeline; Force Capability at any point in time

3 Part Two - Capability Management

Capability Management includes Force Planning, Force Preparation and Force Generation. Described below is how DefenceSuite collaboratively supports each of these discrete functional areas in a single holistic output.

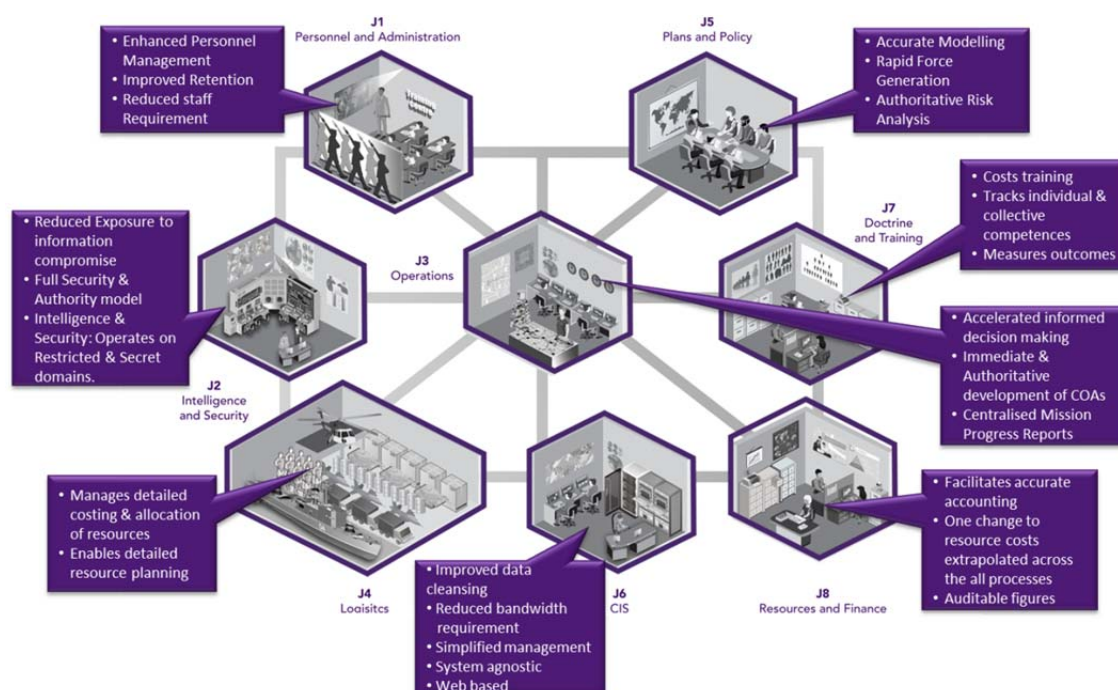


Figure 7 – Information Management & Exploitation across all Branches leads to Information Superiority

3.1 FORCE PLANNING

Force Planning is the principle of planning to meet future requirements based on known facts about current and future capability and commitments. It includes hypothetical planning or creating alternative futures for the purpose of analysis. It also includes defining force structures, planning to match capability to the requirement and possible Courses of Action (COAs) as well as Analysis and Reporting. The value of this function becomes increasingly important when justifying the commitment of resources in an era of financial constraint. Government ministers frequently require accurate analysis and data at short notice to inform top level decisions; DefenceSuite draws on the widest range of the most up to date information to produce the evidence to support those decisions.

3.1.1 Modelling Alternative Structures

DefenceSuite can model alternative futures through contingency planning. This includes the ability to create alternative hierarchical force structures as a result of planned amalgamations, mergers or the creation of new Joint organisations to create perceived economies of scale. This means being able to both merge and split establishments and schemes of complements in order to identify potential savings in capitation costs.

3.1.2 Strategic Planning Support

DefenceSuite is able to support strategic planning by creating alternative COAs or alternative solutions to a problem. This involves creating a schedule of future commitments (requirements), including operational tasks, and analysing alternative plans to meet the known and new operational requirements. Variables may be explored through sensitivity analysis in order to achieve the most effective solution, whilst minimizing perceived risk. Impact analysis is a significant part of this process culminating in Impact Statements for each COA.

3.1.3 Financial Cost Modeling

DefenceSuite is able to support financial cost modelling where each alternative model can predict the associated costs. This may be measured in terms of resources consumed, capitation rates or even days of steaming time or flying hours consumed. This is achieved through copying or cloning copies of a live database into alternative models which will be updated with any changes made to the live version but not vice-versa. Additionally, by taking historical data, consumption rates can be geographically or environmentally sensitized to produce more accurate models. This same principal applies to predicting future costs. If, for example, ammunition costs are known to be in effect from a given date in the future these too can be factored in to ensure all models reflect the most realistic data available.

3.1.4 Performance Indicators

DefenceSuite Key Performance Indicator (KPI) Dashboard is a web application that draws data from an existing application and presents it graphically and dynamically for commanders and key staff in the chain of command. The application is deployed to the Australian Navy and the UK's Royal Fleet Auxiliary to assist in the management of personnel with a focus on key skills and critical capabilities. The architecture of this application means that statistics are collated regularly into a database separate from the DefenceSuite database. These statistics are then used to populate an array of graphs and indicators to alert staff to areas of concern so that timely action can be taken to remedy impending issues. Being drawn from the main database the information is accurate and fully reflects the current situation enabling critical decisions to be made with confidence in the certain knowledge that it is based on the most comprehensive foundation.

3.1.5 Historic Analysis

DefenceSuite is able to support a sophisticated analysis and reporting requirement. This may include Historic Analysis to support a Lessons Learned process, or analysis of current events to support In-Year Management or Future Analysis to support the Short and Long-Term Financial Planning process. It also supports incident reviews where the preceding training program of individuals or units is a factor in determining their effectiveness.

3.2 FORCE PREPARATION

Force Preparation is the principle of preparing current individual, Force Element and formation capabilities in order to meet anticipated operational requirements and readiness. It includes individual training, collective training and readiness including the readiness of both personnel and equipment.

3.2.1 Individual Training

DefenceSuite is able to support the individual training process from where the Training Needs Analysis (TNA) finishes in terms of what training modules are required and scheduling lessons, through to establishment of individual training events, managing attendance at those events, awarding individual competences, costing the events and then providing analytical information back to the TNA in order that improvements can be made to the training cycle. The level of detail allows individual training events to be planned as lessons to which trainees, instructors and resources can be assigned. The outputs are measured and quantified allowing the progress of individuals or groups of individuals to be captured and tracked through each event. All data is presented in a 'traffic light' display to ensure the early identification of problems so that timely remedial action can be taken.

3.2.2 Collective Training

DefenceSuite is able to support the collective training process from a detachment of two, to a whole formation of units, ships and aircraft. This involves users being able to create a schedule of training events from the lowest level (sub-unit or detachment training) through training of Force Elements to a certain level of readiness, to training with other services and nations within an alliance. The training schedule is harmonized with the operational schedule providing just one version of the truth or a combined schedule of all activity.

3.2.3 Readiness Cycle

DefenceSuite is able to support a readiness cycle in terms of creating a template of readiness profiles required to meet the desired output from Defence as a whole in order to support national goals and objectives. The software is then capable of creating readiness slots over time and then allocating Force Elements to the appropriate training to achieve the desired level of readiness by a set date in the future. The system is capable of identifying which Force Elements will be at what readiness at a date selected in the future.

3.2.4 Readiness Costs

DefenceSuite supports the analysis of the costs of maintaining the forces at readiness, in terms of resources consumed (ammunition, track miles, rations, satellite band width etc.), capitation rates or days of steaming time or flying hours undertaken. This information can be used for enhanced in-year budget management and defending or justifying expenditure.

3.3 FORCE GENERATION

Force Generation is the principle of selecting the Force Elements that are ready in terms of matching the Capability of the Force Element required, to meet commitments now and in the future. This intelligent selection process includes individual augmentation, generating bespoke detachments, units or Force Elements at readiness and whole formations, flotillas and expeditionary air wings.

3.3.1 Selection for Force Generation

As a principle, the selection of the framework formations for deployment will probably be decided through military judgment. However, DefenceSuite is able to support such selection and then the individual augmentation process through the selection of key-enabling Force Elements and the backfilling and bolstering of the formation to achieve full operational status. It is often achieving this level of detail that is the most time consuming. What previously took days of staff effort can now be achieved in minutes with DefenceSuite. Furthermore the process is fully auditable to allow review of the decision making and informing any After Action Review.

3.3.2 Impact Statements

DefenceSuite is able to support the impact analysis process and delivers the refined information to support impact statements. This includes highlighting shortfalls in capability whether they are individual competences, collective competences, readiness or key battle winning equipment shortfalls.

3.3.3 Deployability Assessment and Sustainment Analysis

DefenceSuite is able to support an overall assessment of 'deployability' of Force Elements by enabling analysis of individual competences, collective competences, readiness and key battle winning equipment. After force selection DefenceSuite supports the process of analysing the sustainability operations over time. This involves combining the schedules for training, operations and other commitments and making an assessment of whether the schedule can be fulfilled using existing and planned resources within the force structure

3.3.4 Force Recovery

DefenceSuite is able to support the Force Recovery process, which involves the planning and execution of withdrawal plans at the completion of an operation. Reconstitution of forces after recovery is facilitated as training and personnel priorities can be accurately and rapidly identified.

3.4 DRAWING IT ALL TOGETHER

Knowing future military capability is considered by some as the key competency of planners and is represented on the left hand-side of Figure 5 below by a force structure consisting of Force Elements. These Force Elements consist of individual personnel or groups of personnel, which can be anything from a detachment of two, up to a complete unit, ship or Expeditionary Air Wing. Force Elements have an attribute of readiness which in turn depends on their collective trained competence and equipment availability. Collective competence can either be a summation of individual competences or a separately assigned collective competence taken from a list of Mission Essential Tasks (METLs). DefenceSuite not only tracks people, posts and competences assigned to both, but will also track the Readiness of the Force Elements for active deployment and track the availability of Key Battle-winning Equipment (KBE). In addition to the peacetime posting of people to posts, DefenceSuite is also capable of augmentation for short notice deployments – including the augmentation of pinch point trades for operations and other commitments taking account of both individual and collective commitments. The summation of people, readiness, training and equipment availability gives a measure of 'deployability' and the ability to deploy forces over time gives a measure of 'sustainability'.

3.4.1 Optimising Supply & Demand

The requirement side of the equation (on the right hand side of Figure 8 below) includes a schedule of future requirements (commitments) which has a time function and will include not just operations but other commitments such as training, re-fit and other demands on the Force Elements. Whatever the commitment within the future schedule, there is an Force Element requirement (unit, ship or aircraft or Expeditionary Air Wing) which will be required to fill a specific role (either Contingent or Committed), with a collective competence, which can be divided into the essential components of; a number of posts (such as a Force Element Table or Combined Joint Statement of Requirement) that has to be able to meet the 24/7 requirement, filled to 100% with competent trained personnel and with all KBE available. These Force Elements need to be sustainable and, increasingly, there is a need to be able to track and capture the costs of the resources allocated to, and consumed by them (such as ammunition, vehicles, fuel and capitation). Only by having knowledge of the such data is it possible to conduct effective scheduling and sustain the deployment of Force Elements from peacetime locations, over extended periods of time – thereby optimizing the balance of current and predicted supply with future demand.

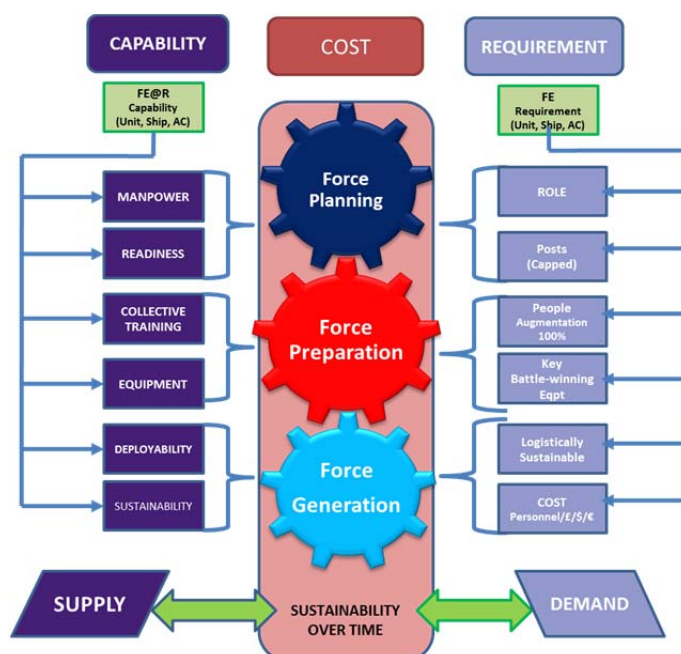


Figure 8 – The Supply / Demand / Cost / Capability / Requirement Paradigm

3.4.2 Synchronising Planning, Preparation & Generation

Bringing both sides of the paradigm together (in the centre, to a fixed cost) is the day to day business of; planning to meet future requirements based on known facts about current and future capability. Such activity must ensure commitments are efficiently made as a result of operational plans and contingency plans, matched with the known future force structures and contingent requirements. Preparing current capability to meet the future requirements requires coordinated, resourced and cost effective training activity. Finally when Force Elements are trained and prepared a full understanding of capabilities is required to ensure the most appropriate Force Element is assigned to meet commitments now and in the future.

3.4.3 The Single Holistic View

DefenceSuite provides a single holistic view, through a common database of information which articulates appropriate understanding and knowledge to decision makers. With DefenceSuite, these communities of key decision-makers can share data more collaboratively and enable Information Superiority, leading to the Decision Superiority required for the most effective force planning, preparation and generation.

Allocate Software

Corporate Head Office

1 Church Road,
Richmond,
TW9 2QE

Tel. +44 (0)20 7355 5555

Fax +44 (0)20 7355 5588

UK Regional Office

Compass House
The Point, Coach Road
Shireoaks, Worksop
NOTTS
S81 8BW

Tel. +44 (01909) 506276

Fax +44 (01909) 478165

UK Regional Office

Unit 5 Kings Meadow
Ferry Hinksey Road
Oxford
OX2 0DP

Tel: + 44 3300 881 757

Fax: +44 8715 289 031

UK Regional Office

Keele University Science
Park, 2nd Floor IC3,
Keele
Staffordshire
ST5 5NP

Tel. +44 (0) 1782 667001

Fax +44 (0) 1782 667009

Time Care AB

Swedish Head Office

Franzégatan 3 3tr
112 51 Stockholm

Tel: +46 8 5055 1800

Fax: +46 8 5055 1899

Time Care AB

Swedish Regional Office

Kungsgatan 32, 4tr 411 19
Göteborg

Tel: +46 (0) 31 724 28 80

Fax: +46 (0) 31 724 27 01

Allocate Software PTY Ltd

Australian Head Office

Suite 2, Level 13,
99 Mount St
North Sydney NSW 2060
Australia

Tel. 1300 767 837
or +61 (0) 3 9534 4477

Allocate Software PTY Ltd

Australian regional Office

RosterOn Pty Ltd
Level 6, 636 St Kilda Rd

Melbourne 3004

Tel: local 1300 767837
international +61 3
95344477

Fax: +61 3 9510 8681

enquiries@allocatesoftware.com

www.allocatesoftware.com

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05/09