

**CNEO's SYMPOSIUM
AND
CONFERENCE
THE CHANGING ENVIRONMENT
A REPORT**

BY

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ABSTRACT

Those unable to attend the conference can take comfort that, through this issue of the *Journal of Naval Engineering*, you can enjoy one of the two key benefits of the event - that of being updated on the plethora of change that is taking place within the defence arena. You missed the opportunity, addressed by the symposium, of being able to influence the process of that change in the context of the 'Tomorrow's Personnel Manning Strategy' (TOPMAST) programme. However, the doors are still open for you to make a contribution within the TOPMAST programme as the months of consultation and decision making proceed.

INTRODUCTION

BY

REAR ADMIRAL M.G. WOOD, CBE, CENG, FIMECHE
(The Chief Naval Engineer Officer)

The remit for influencing the future RN personnel policy rests with the 'Tomorrow's Personnel Manning Strategy' (TOPMAST) programme. However, the TOPMAST team do not have a monopoly on good ideas or a corporate wealth of experience. They need advice in their quest to provide solutions to the current manpower problems. They need help in determining the future structure of the Navy. Thus, CNEO gave the engineering fraternity an opportunity to contribute to the debate by looking at how the engineering branch needs to evolve if the RN is to remain a world class armed force in 'the changing environment'.

The position of CNEO is an appointment and not the honorary title many perceive it to be. However, the admirals who have been so honoured have all used the role as a vital conduit to represent the views of engineers to the First Sea Lord and members of the Navy Board. This is, perhaps, more important now than it ever was as so many naval engineers are employed away from the parent service. Out of sight, but not out of mind or unrepresented, as the CNEO has people feeding him advice from many directions as surely as he heeds this advice and then uses his experience to weigh it and, if necessary, represent it wherever it is needed.

The key advisors:

Engineer Flag Officers Meetings

These are attended by our senior naval engineers who have been there and done that (including CNEO in some cases) and are thus very well placed to offer sound advice.

Engineering Advisory Panels

Three panels representing the three engineering disciplines of Air, Marine and Weapon engineering. The three panels exist to provide authoritative advice to the CNEO on all engineering matters. Their key directive is to ensure that any 'grass root' concern can be reported and acted upon, such that it can exert a positive influence on MoD policy in a manner that is coherent across the engineering branch, within the Royal Navy's requirements as a whole. The CNEO ensures that there is coherency between the concerns expressed through the panels in order to represent the 'engineer's' view. The forum for this is the Engineering Flag Officer's six monthly meeting.

CNEOs Conference

It is certainly not patronizing to include the Conference in the list of advisors as most professional and political conferences exist to share ideas and generate debate. The engineer Flag Officers were there and were receptive to the grass roots advice that they, no doubt, received in good measure, both in the formal symposium and during the 'Conference's social interludes.

Giving over the first day of the conference to TOPMAST, CNEO urged the delegates to use it as a real opportunity to address manpower problems, as it is an immense undertaking that carries the responsibility of expectation. He cautioned against being parochial or transfixed by the officer corps, as the rating majority must be duly considered. Whilst TOPMAST is driving the naval solution it must lie alongside the joint and civil partnership. It must recognize that which is good enough to retain and identify, challenge and validate all current good practice. In this we can help for we are its custodians. The prize or the pain is the vital manpower component of operational capability. Failure in getting the manpower equation right is, thus, not an option.

The CNEO's Conference provided one opportunity to contribute to the transparent and open debate. The admiral told the conference that he has strong views about manning and the issues they would discuss, but would not disclose them as they were only as relevant as the views of the assembled engineers. He would use the Conference and Advisory Panels to ensure that he presents the engineering branch views to the First Sea Lord rather than his own (but anticipates that debate will see them aligned).

SYMPOSIUM

INTRODUCTION

BY

VICE ADMIRAL Sir Fabian MALBON, KBE
(Director TOPMAST)

“A manning structure that is struggling in 2002 will certainly not meet the challenges of 2015. The status quo is therefore not an option and the need to change for the better is pressing”.

The First Sea Lord; January 2002.

TOPMAST was initiated by the Second Sea Lord as a strategic manpower review. But what is wrong with the system we have got? It has served us well for as long as we can remember and we seem to be able to maintain all the operational tasks imposed on us with great success. The truth is that the current system is creaking at the seams and it is only the hard work and dedication of our people that provides the oil in the system to make it run.

With a regime that was designed for a navy of 120,000 plus, we find that the checks and balances that were designed into the system to protect our people now work against us. The introduction this year of the measurement of individual harmony across the three Services would, in any event, have demanded a new way of doing personnel business. For the first time the separation experienced by each individual will be obvious for all to see. We can no longer shelter under the umbrella:

‘Harmony to the hull.’

The Navy Board set the wheels in motion by providing a direction in the shape of the *Guiding Principles* paper. It is not a proscriptive piece of work, but one that sets out the answers to many of the high level questions that the TOPMAST team need to be addressed before work could continue.

Questions such as:

- What sort of Navy do we want?
- Must it be able to fight intensity and cull sheep, or only do one of these things at a time?
- Should we be able to sustain operations such as we are seeing in the Gulf and the Indian Ocean and provide instant disaster relief and humanitarian aid or one of these at a time?
- Do we want the same pyramids of officers and ratings in 20 years time, or should we look for different ways of doing business?
- Will the First Sea Lord, in 20 years time, be picked from a restricted cadre of officers who have held sea command, or will any officer of the right calibre and ability be able to aspire to the top slot?
- How can we reward essential skills in ways other than promotion and rank?
- What ratio of sea to shore service is acceptable and what periods away from family and friends will be acceptable in 15 to 29 years time? If the answer from demographic studies is, let's say, three months, then it's no use designing a manning regime that demands six month deployments – as no one will join!

So TOPMAST is a fundamental, clean sheet reviewer of the manpower regime we will need in 15 to 20 years time to make the future Navy work. Manpower will no longer be a 'free good' and the fact that manpower costs are some 40% of the Total Through Life Cost of a unit will have to be confronted. It seems to me that all the recent manpower studies did their work with one hand clamped firmly onto the present. This was their weakness and this method will not produce the required results. We have to take a brave leap forward and confront the future, decide how we are going to cope with it and then design the route map of how we are going to get there.

Our route will have to be future-proof, as financial realities and world events will not lie unchanged as we get ourselves organized. But as flexibility is to be our guide as we move forward, we should be able to survive. Be in no doubt that there are herds of sacred cows to be slain, and numerous dinosaurs to pour scorn and delay progress. The senior cadre of the Royal Navy, the Flag List, will disappear into retirement over the next ten years, so it will be up to all of you currently serving as junior captains, commanders and below who will have to carry the changes through to achieve the new navy.

Much hard work lies ahead, and it will all be, inevitably, additional to the day job. I can tell you that starting the TOPMAST Review off has been the easy part, and I will be leaving the real graft behind to the new Director, the TOPMAST team and just about everybody else in the Royal Navy. I shall watch with interest from my wheelchair as this crucial work progresses.

The following is taken from the TOPMAST briefings at both the Symposium and the Conference.

Why is our current manpower system struggling?

For starters it is:

- Hierarchical.
- Bottom fed.
- Too rigid.
- Inflexible.
- Over regulated.
- Inconsistent across the naval service.

There are:

- High levels of gapping causing a host of manpower Opdefs.
- Insufficient first sea draft capacity.
- Dissatisfaction and high outflows (more leaving than joining).

All these contribute to the problems that are will not be solved by papering over the cracks. It matters because people will lie at the heart of sustainable operational capability for many years to come. This will not change alongside the increased use of automation and our ability to use unmanned platforms for many activities, as the very nature of our business requires the competencies of adaptability and flexibility in response to a unpredictably changing environment. By definition, you cannot programme a machine to cope with the unpredictable. Operational capability encompasses human resources across its four strands of manpower, equipment, training and sustainability, so hang on in there, as we need you!

Thus, operational capability depends upon a successful manpower strategy. That strategy has to be flexible and adaptable to varying operational routines. It cannot be cumbersome as it must be capable of being easily managed. And, to be

sustainable, it must have attractive terms and conditions to both bring in the recruits and then retain them.

The TOPMAST directive considers the individual's right to have aspirations as well as the Navy's need to develop their competencies to the Navy's advantage. The *Future Navy* paper seeks:

'To develop a flexible and responsive manpower system that will deliver the manpower component of Operational Capability (OC) while providing attractive career employment for naval personnel.'

We have actually been quite flexible in the past as, for example, our people migrated through steam to diesel to gas and now are able to consider electrical propulsion. But much of this may have been a legacy of the luxury of long periods of training to acquire multi-skills within a career where the vast majority does not use most of the skills gained. (Multi-skills! – There was an air-crew officer on HMS *Ark Royal* during the late 1980s who was also a medical doctor and a member of the ship's diving team. He also could have done with a PTI's adqual to give him the skill of being able to lift such a heavy pay packet).

Mention pay, and one must consider the fact that manpower is the single greatest factor in the whole life cost of a ship or, indeed, any function requiring uniformed personnel. Therefore, the first item on the agenda is the cost effectiveness of uniformed personnel as there is pressure to replace them with 'less expensive' uniformed or non-uniformed staff in many areas. TOPMAST considers the functional use of personnel in five areas:

- OC delivery – the war-fighting platforms and systems.
- Training – where experience in OC currency and ethos are vital.
- Command and Control – where OC delivery experience is crucial.
- Support – where certain knowledge of sea-going equipment and practice can only be delivered by uniformed personnel.
- Strategic Planning – where currency and experience are fundamental requirements.

As four of the five areas are subservient to the first, OC, and that is the exclusive domain of service personnel, uniformed personnel are, therefore, indispensable. However, we have to use them economically and to best effect and concede where non-uniformed people can achieve the stated requirement without detriment to achieving OC.

Strategic View

As manpower is expensive, it must be used efficiently. This means that the balance between automation and humans must have the right mix of hardware, software and human contribution. Manpower must be adaptable, responsive and flexible so that a local commander can use his resources effectively. It must also take place in an attractive service environment that provides fulfilling careers to the modern young professional for whom the harmony guidelines are a measure of the quality of life.

What TOPMAST is not is a huddle of experts working in isolation to solve the Navy's manpower issues. There are many planning tools and study papers that are current tender and the Topmast strategic blueprint has made it through the efforts of the team becoming conversant with them all. The *Naval Strategic Plan* (the corporate glue that links manpower strategy with the future Navy papers), the *Future Navy Paper* and the *Future Naval Operational Concepts* paper will be explained later in the article. But there are others underneath TOPMAST's footprint:

- The Armed Forces Overarching Personnel Strategy Performance Standards.
- The Naval Personnel Strategy, and the supporting papers.
- Personal Functional Standards.
- The Naval Manning Strategy.
- The Individual Training Strategy.

Individual harmony is fundamental to TOPMAST; allowing people to plan ahead and feel in control of their destiny, whilst competencies are its key theme. These terms do not spring from a management fad but are the bedrock of a modern thinking organization. The component parts of competencies are the skills, knowledge, experience and attributes that, once identified and enabled, will place the right man in the right job, and continue to do so for the conceivable future.

TOPMAST are also receiving counsel from the Type Commanders and the Integrated Project Teams (IPTs) about the demands that will be placed on manpower as new ships are brought into service and new, more intensive, operating patterns are expected of them, as these will both influence the manning policy.

The seed corn

In 1970 there were four workers to support each pensioner, in 2010 there will be two point eight workers supporting each elderly person and three times more people living in a security environment. Defence draws funds from the same source as these dependants and they all require a healthy economy in order to sustain them. (As it affects most readers, one incidental news item last week pointed out that the majority of people under thirty were lax in their financial planning for the future and most may have to work until they are 72 in order to fund their retirement!)

New technology will produce smarter systems, more reliable equipment, higher platform utility (management speak for more time at sea) and these will all influence manning regimes. Added to this, legislation is creating another 'manning' issue as mandatory task qualifications, equal opportunities, working time directives and parental rights all have to be considered in an environment where such protective legislation is certainly not going to reduce in scale or effect.

Finally, as we recruit from an ever more rigid and prescribed education system, our recruitment starting position must be in harmony with it. It must also conform with the other two Services with whom we operate in an ever more joint and tri-service way.

Achievements

Using a football team as an example, a fortunate manager has a larger squad than is required to produce the eleven players on the pitch. He can then rotate the players and still perform when faced with injury problems or absences (harmony). Exactly this kind of squad manning is being introduced in HMS *Liverpool* whereby 'extra' able seamen allow the management to move people around, both on and off the ship, to deliver higher platform utility without affecting the ship's operational capability or the rating's harmony.

More of a TOPMAST recognition rather than a achievement, the study has laid bare the inefficient rigidity of the current naval manpower system. Fifty-two specialisations, a further 73 sub-specialisations and a plethora of Additional Qualifications (Ad-quals) make a person suitable for a particular draft and provide

a headache for those trying to achieve a match. Clearly something needs to be done; and it is. A revised OM-LOM pipeline has been devised so that their training consists of generic career training coupled to Targeted Employment Modules (TEMs), which are not exactly PJTs as:

‘They will be tailored for individual ships to suit their particular requirements using the onboard and Fleet Waterfront Organization (FWO) manpower management resources.’

The generic element is a partnership agreement between the recruit as he/she progresses through a naval career and the Navy for providing the development opportunities (which he/she, as an active partner, can grasp or place in the opportunity missed basket). Core skills provision is a balancing act between the training output provision of a person who is flexible without being multi-skilled. It will concentrate upon functional and behavioural competencies. For example, a ‘new’ warfare rating will join a ship certified ‘safe’ to effectively walk up the brow, with competencies in basic sea survival, mechanics and the ship’s action information organisations. The TEMs will be bolted onto these as soon as possible, to be followed by a gradual accumulation of responsibilities as the employers, supervisors and mentors see fit.

To assist them, TOPMAST paints the big picture in:

- Encouraging the delivery of versatile manning policies.
- Optimized employment skills.
- Simple structures and processes.
- Effective and flexible career management mechanisms.

They strive to centre harmony on the individual and deliver a comprehensive pastoral, spiritual and welfare rich support system.

They also supported the introduction of the Executive Warrant Officer position on destroyers and frigates to manage the ‘squads’ and placed greater emphasis on the provision of the Waterfront Manning office.

Process

To help the TOPMAST team in their own work they are developing a naval manpower requirement model which is based upon a proven industrial one and features the capability requirement model that looks at the proportions of naval manpower involved in certain activity areas:

For:

- OC delivery (conduct of military tasks).
- OC development involved in future operational outcome (policy, strategic planning and research).
- OC sustainability for the support to provide for, sustain and recover military forces.

Against:

- Core business
The sharp end of carrying out tasks to meet objectives.
- Core business support
Which are normally technical tasks.
- Command and control elements
To supervise, direct and coordinate.

- Administration support

In order to make for an efficient operation.

The model is then able to predict the manpower proportions after the application of the TOPMAST initiatives. Research has shown that they do make a significant difference in the bias. The model can be applied at high command, establishment or individual unit levels. e.g.

- Fleet provides OC delivery.
- Ships, submarines and aircraft are the core business.
- The Waterfront staff form the core business support.
- HQ the command and control and, also, the administration.

The In-tray

The largest current task of the TOPMAST team is to help and advise the people belonging to the organizations that are facing the immediate challenges arising from the TOPMAST initiatives. They have to assure that their proposed manning regimes are viable as they are being exported to other specialisations and rating levels. The specialisations themselves are being scrutinized in parallel with the identification of competencies as both have to be teased into viable skill groupings. Appropriate rank and rate structures will emerge from this debate as will the options for staged careers and enlistment policy.

How it will work

Success will be measurable in:

- Improved OC.
- Reduced front line gapping.
- Improved (geographic) stability and guaranteed time ashore.

The TOPMAST team are confident that this will lead to a grateful naval population, hence it will improve the retention rates, generate longer careers and lead to a reduction in churn (the sea to shore cycle).

However, although TOPMAST is proposing some very radical solutions to the manning problems, they will be introduced sensibly and not as a big bang effect. This is because the Navy is evolving and some legacy platforms will endure into the 2020s and they will require the current competencies.

Conclusion

We were left in no doubt about what engineers should aspire to. All manpower requirements must have direct linkage to the delivery of one (or more) of the components of OC. The word flexible will replace multi-skilled, although professional qualifications in discreet areas such as watchkeeping will still feature large in everyone's life. Engineering skills will certainly be required for the core job, but will also be enabled for tasks other than war-fighting.

The manpower element of a ship's whole life costs will be considered in the arguments about automation. The manpower costs will include recruitment, training and retention. Virtual diagnostics and 'reach back' will have a place in ships, but people with sufficient skills will have to be available at sea in order to recover the ship from a wartime or peacetime calamity. We will have to work within the boundaries we are not empowered to alter, most importantly the educational feeders for our young recruits and the industry and commercial pressures that operate with different targets and under different rules. We will

develop a synergy with NATO, the other services and those involved in combined operations.

SYNDICATES

Following the introduction to TOPMAST the delegates were grouped into twelve syndicates to brainstorm selected issues. To avoid pre-conceived ideas, the delegates had no prior knowledge of which syndicate they would be in or what topic they would have to address, although they were encouraged to do some pre-reading to inspire some notions. Of course one afternoon's brainstorm is a mean amount of time to devote to something so important, but the session was productive and it did add up to an impressive amount of man-hours of work from a wide cross section of the engineering community. Furthermore, the delegates were all encouraged to become disciples of TOPMAST and take the message back with them to their parent units to encourage debate.

Most syndicates looked at competencies. Asking themselves;

- What skills and competencies will an engineer require fifteen years from now?
- Are our current competencies discrete and enduring?

And specifically:

- What skills and competencies should the Fleet Air Arm take to the Royal Air Force and Army Air Corps as they work closer together?
- Is there scope for convergence in their training and development as one third of FAA naval mechanics and one quarter of artificers work in a joint environment?

One syndicate considered the possible wider employment of WOs and CCPOs and came up with some interesting proposals, which the TOPMAST team have taken onboard. To do this they had to examine the broader aspects of managerial requirement at sea and in the support community ashore, in order to consider the range of tasks they could do.

Another syndicate considered the normal means of entry into the service whereby the current recruits join at the bottom. Most of industry accepts that suitably qualified people will enter and leave their profession at all levels. The syndicate considered whether this was a more efficient use of resources in light of the modern trend where people are wishing to be more career mobile.

The final syndicate was reminded that, although the Navy trains its people in skills to fight wars that are linked to operational capability, there is also the wider defence requirement that needs people with certain competencies. The syndicate was asked to look at a holistic process that will enable us to define the competencies required to meet both front line capability and the wider defence requirements that are defined in extant warfare doctrine. This would, naturally, steer them into the minefield of the value of uniformed (against civilian) personnel ashore.

The syndicates went away to deliberate on their own and then report back to the gathered audience, which included the Engineering Flag Officers. These reports were then collated overnight by CAPTAIN JONES and COMMANDER FORSYTH from the TOPMAST team in order that they could report the findings as part of the conference TOPMAST presentation.

THE OUTCOME

The CNEO concluded this part of the conference agenda by reiterating to the audience his determination that the broad church of the engineering community would be engaged in this crucial part of the TOPMAST debate and to build on the good start provided by the symposium. The value of the syndicate exercises should not underestimate, the output had undoubtedly validated some of the early work of the TOPMAST team and provided further food for thought.

The delegates visualized structure of an engineer's career in terms of three vertical phases namely the:

- Operator.
- Maintainer.
- Manager.

And three horizontal groupings:

- System operators.
- Diagnosticians.
- Trainers.

The brigading of the horizontal theme will support the command in achieving OC. A competency based approach in the development and employment of engineers was affirmed as being entirely valid and there was broad agreement on which competencies are enduring. These were mainly the experience based skills and knowledge although they included the necessary communication and leadership skills required in a military environment. Defining which competencies are discreet or individually distinct presented more of a challenge. The delegates believed that there is a need for independent arbitration in establishing the competence base, both in relative merit amongst differing competencies and the level appropriate to each career stage. This means that it will be possible on occasions to trawl for experts and it allows the system to invoke training efficiencies by not delivering too much too early. Within this exercise there is the need to retain an open-minded approach to the inclusion of potential competencies that can be defined (here) as 'thinking outside the box'. For without releasing the innovator's potential it may not be possible to achieve what is required.

Naval ethos is a common phrase that can be used in a protective way (but is needed in this job description) but exactly how naval ethos enhances a position needs defining so that it can be protected as independent arbitration may not capture it adequately (is it pivotal or anathema?)

The potential danger that the fundamental tenet of risk management would be undervalued in the search for efficiencies was identified. The delegates also thought that leadership skills were more crucial than management skills in the delivery of OC. There was wide agreement on the minor differences between current and future competencies although work is needed to define the differences, as the discrete competencies will be different for the future Navy. The focus needs to be on delivering OC.

The depth of training at the different rating responsibility levels needs refining as they, clearly, have to be used in the front line. The amount of training delivered was also seen as a retention issue as it aligns to the important accreditation that has to embellish the young engineers CV. If it cannot be delivered at the desired depth inside the armed forces then engineers may seek to improve their standing 'outside'. There was, however, the feeling that it should not simply be handed out on a plate, but there should be more opportunities for self-starting down the personal improvement route. Also, there needs to be delineation between that

which is seen as training and that which is purely education (experience must include education) and all training must be based on a competency level developed alongside that used in industry. Training need:

- Recognizes the growing divergence between skilled and semi-skilled status.
- Acknowledging that there was an increasing technical nature of the higher level skills.
- At the same time recognizes that there is an enduring need for low level skills.

The problem is working out how many of each type of person should be developed and how to change the current training regime of collecting, cramming and releasing them back to the fleet full of new skills they may never use and will, therefore lose (skill fade). Recognizing that there is a need for 'dirty hands' skills, there must be new rewards built into the structure so that they feel wanted.

The delegates had difficulty separating the discreet competencies required for Marine or Weapon Engineers (WE) and this suggested a growing sense of convergence between the two engineering specialisations. However, the need for rapid restoration of OC by a team of deep specialists may favour the retention of a deep specialist WE cadre.

A new structure

A bottom fed Navy was firmly discounted as being very inflexible. So too was the link between rank and rate. The left and right arms need separating as it will not be possible to recruit pre-trained engineers into positions of responsibility (e.g. radar maintainers) and pay them the same as new junior rate recruits. There is a need for sideways entry points so that engineers can enter the Navy at different competence levels (and out again on career breaks) if that's what it takes to achieve OC. Of course there also has to be mutual attraction as the Service tries to capitalize on the engineering base in industry and academia (The Navy must like what they can give, whilst they must like what the Service can offer). However, there remained a strong support for a full career-based cadre of people who have the 'naval ethos' embedded into their psyche and who can use it to influence the ship's war-fighting capability.

The feedback on Warrant Officer (WO) and Charge Chief Petty Officer (CCPO) employment was clear and offered some very practical suggestions. Although the CCPO is seen to be fully employed at sea, it was recognized that a destroyer/frigate might be able to manage on one WECCPO. It was suggested that he might be diverted to the minehunting fraternity as the role of the senior WEA could be upgraded to a Charge Chief's billet. There is no reason why the WO should not aspire to occupying the deputies' post at sea in the destroyer/frigate.

Ashore, the opportunities for enhanced WO and CCPO employment is mainly driven by budgetary and training constraints with the resulting need for longer drafts and the delicacy of partnering with industry. However, there are many WOs and CCPOs who enjoy rewarding careers ashore where their experience is invaluable at the sharp end of the WSA. This is mainly through getting their hands dirty in the technical arena in much the same way as the traditional SD officer once did. Core competencies of CCPO and WO are very similar and, perhaps, these need to be defined better in order to explore their relevant employability potential. (Remembering that the rate of CCPO is not substantive and there is a case for aligning it to the Army WO2 rank).

CONFERENCE

THE CHANGING ENVIRONMENT

“The professional military mind is by necessity an inferior and unimaginative mind. No man of high intellectual capability would imprison his gifts in such a calling.”

H.G. WELLS

Of course the Navy’s image has improved since then, and the Service is now engaged in the continuous improvement that stems from controlled change. The *Naval Strategic Plan* is driving this progress and its five pillars (FIG.1) represent the areas in which the Navy must excel if it is to remain a world class armed force. Each pillar is sponsored by members of the Sub-Navy Board acting on behalf of the Navy Board and all have champions (a Commodore and Warrant Officer) appointed to represent your views.



FIG.1 – THE FIVE PILLARS

Table 1 shows how dynamic this changing environment actually is as it looks at the five pillars against the initiatives that have recently been implemented or are being introduced in the short, medium and longer term.

TABLE.1 – *Changes in Basis – the Five Pillars of Initiative*

PEOPLE	
Recent	Ratings and Other Ranks Reporting Systems; Revised Personnel Functional Standards; Merit Promotion; Pay 2000; Officers Joint Appraisal Report, Continuity Drafting.
In Hand	Single Living Accommodation; TOPMAST, Pay 2000; Complement and Pay Reviews; Defence Training Review (DTR); Harmony.
2-3 Years	TOPMAST delivery; Balance strength to requirement; Joint Personnel Administration Strategy Study.
Longer Term	Incorporate findings of DTR into Naval Training Strategy; Project SLAM.
EQUIPMENT	
Recent	SMART acquisition; Reliability Centered Maintenance (RCM); Customer Supplier Agreements (CSAs); WSA; Joint Stores Tracking.
In Hand	RCM; Integrated Logistic Support; New equipment; Lean Support Chain; Customer 2 Organization.
2-3 Years	Modernizing maintenance; Safety Assurance; ME Development; SMART Acquisition
Longer Term	Habitability; Reduce Cost Of Ownership (COO), Commonality; Enhance early entry forces.
READINESS FOR OPERATIONS	
Recent	Joint Force Harrier (JFH), Joint Helicopter Control (JHC), Joint Doctrine and Concepts Centre (JDCC), validate Maritime Control for Joint Operations (MCJO), Streamline acquisition.
In Hand	Develop MCJO; PRISM; Enhance PIS; Fleet First.
2-3 Years	Improve Jointery; Sustainability; LFE processes; PRISM; CSAs; Command and Control, Communications, Computers, Information interoperability; COO.
Longer Term	Improve interoperability and measurement of cost effectiveness.
RESOURCE MANAGEMENT	
Recent	Private Finance/Funding Initiative; Public and Private Partnership; CAPITAL; Improve Navy Performance Plan; Rigorous Performance Inductors.
In Hand	Exploit CAPITAL; Resource Account Budgeting; Improve management training.
2-3 Years	Market spare capacity; Output costed CSAs; 'Modernizing Government'.
Longer Term	Improve interoperability and measure of cost effectiveness.
PARTNERSHIPS	
Recent	CWG/PT; JHC; JDCC, JFH; External advisor to Navy Board.
In Hand	Defence Diplomacy; Medicine; European Security and Defence Identity (ESDI); UK 'Maritime Cluster'; Defence relations.
2-3 Years	Relations with suppliers; Media, Mercantile Marine; Academia and RNR employers
Longer Term	Evolve ESDI (Amphibious initiative, EMMF, Maritime initiatives).

How it all fits into the great scheme of things is shown in the IPT Focus (FIG.2).

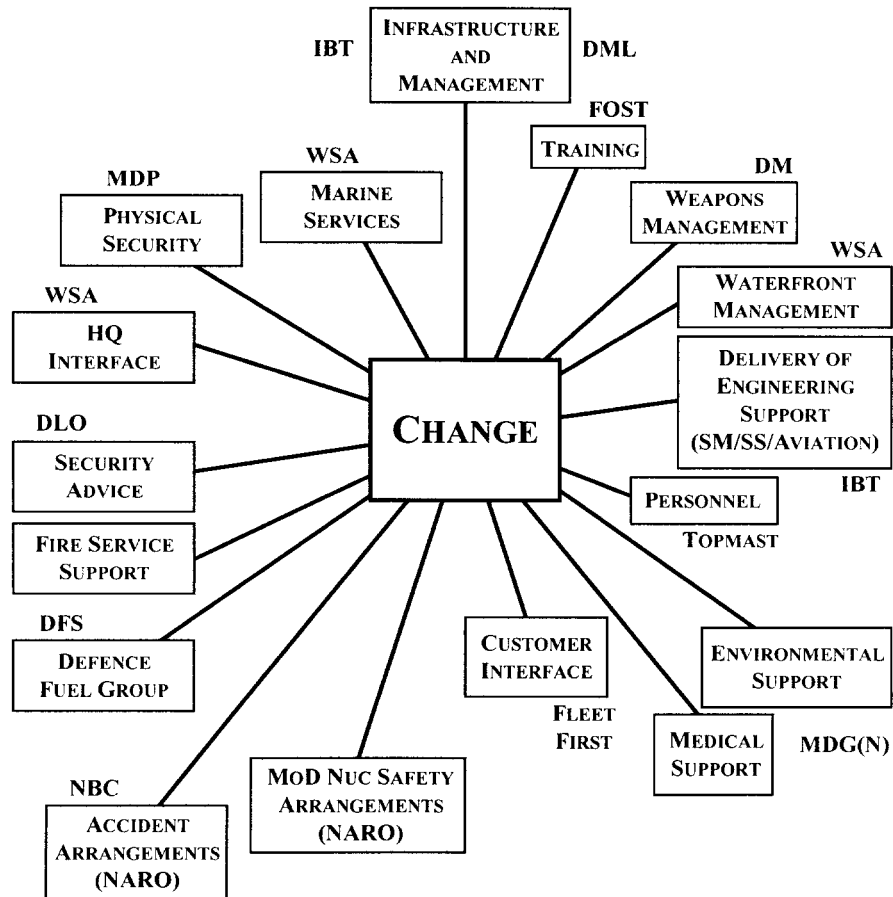


FIG.2 – NBC Focus

Using the Helicopter Engine IPT as an example (FIG.3), it shows the kind of initiatives that are directed their way. It demonstrates a hive of activity, with many initiatives that are generating fundamental change in the way we do our business; all of it focused, all of it controlled and all of it aimed at improving OC. Scanning the initiative will identify the involvement of engineers in their significant role in managing change.

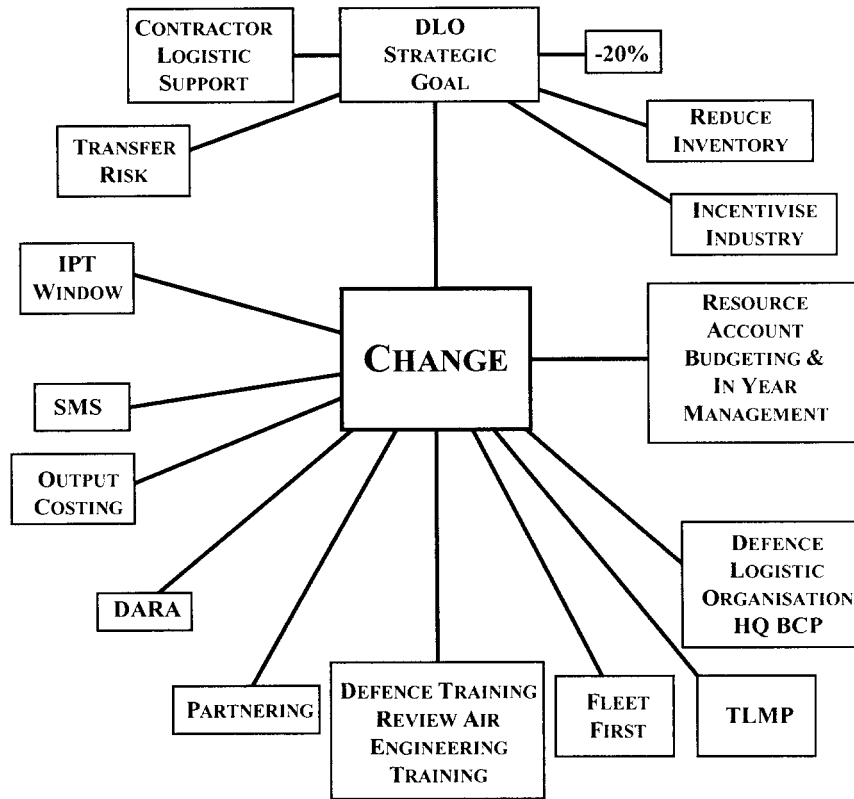


FIG.3 – HELICOPTER IPT FOCUS