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## CHAPTER 8

### THE FUTURE REQUIREMENTS

#### INTRODUCTION

A Navy always needs to predict its future requirements in order to be prepared to meet the needs when they arise. The requirements can manifest themselves as personnel requirements (type of training and knowledge required) and hardware requirements (platforms and equipment). Together they make up the future capability of the Navy.

Technology research needs to be directed in order to assist the Navy in meeting its future requirements effectively. The Navy has a number of research institutions that can do directed research for it.

This chapter will concentrate on how technology research is used to benefit the SA Navy and also what new capabilities have been identified that the SA Navy will require in the future.

#### TECHNOLOGY

**Use of Technology.** Technology is changing rapidly and it is necessary to keep up with technology trends in order to exploit the opportunities that technology provides. Using technology effectively, is a means of getting to the required end state. The SA Navy is funded to have partners in the Defence technology institutes and industries that can do technological research for the Navy and advise it on certain technological matters with the following end states in mind:

- Make the Navy a knowledgeable buyer of new equipment and capabilities.
- Assist the Navy in using its present equipment most efficiently.
- Assist the Navy in developing sound tactics with in equipment limitations.

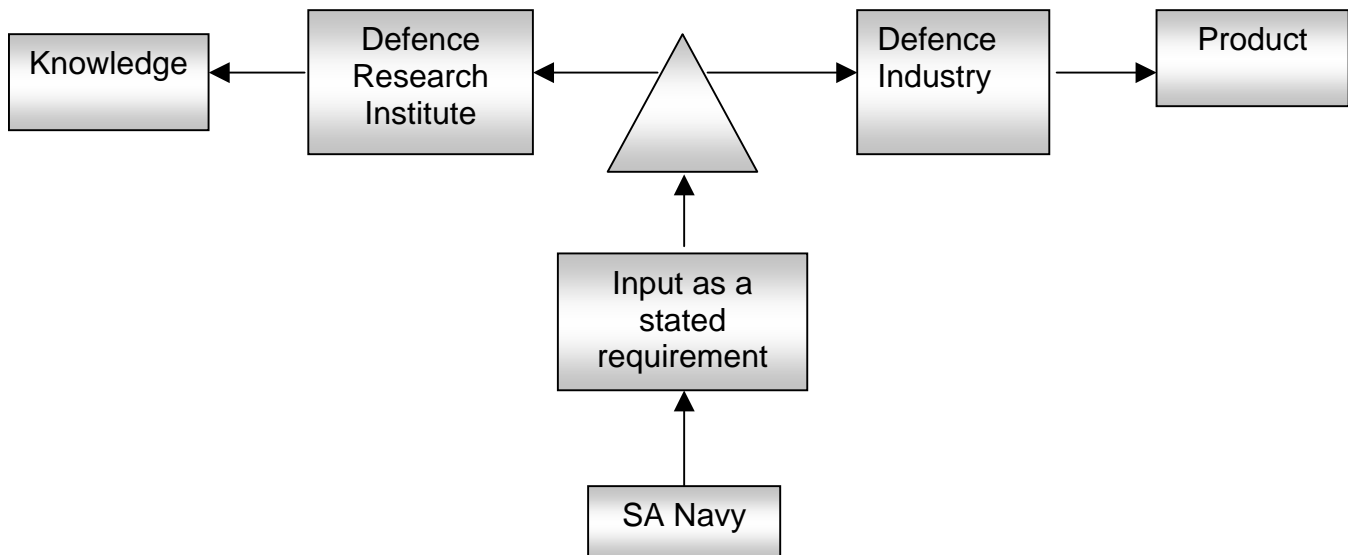
In order to do the above, the providers of technological research must be in partnership with the SA Navy to ensure that it gets the maximum value for the money spent on



The use of technology and the Research Institutes has assisted the SA Navy in analysing the results of missile and torpedo firings in order to identify problem areas.

technology. The relationship and responsibilities between the SA Navy and the Defence Industries and Institutes are described below.

**Figure 11: Relationship of Responsibilities with Respect to Research**



**SA Navy Responsibility.** The SA Navy is to give the input as a stated requirement of what product/knowledge it requires from the Industry/Institute (service provider). It is the SA Navy's responsibility to monitor progress and to provide continuous direction to the service provider to ensure that the deliverable satisfies the Navy's requirement.

**Defence Research Institutes (DERI) Responsibilities.** In summary, the DERIs provide the knowledge for SA Navy to be more knowledgeable on specific issues, or to assist the SA Navy in making specific decisions on future requirements to satisfy particular needs. In addition, DERIs are also used to conduct research in specific areas in order to assist the SA Navy in improving its warfare capabilities.

**Defence Industries (DI) Responsibilities.** The DIs are to provide a product and/or technical support to the SA Navy. The products could be equipment with unique capabilities, or equipment improvements or upgrades when equipment becomes obsolete. They provide inputs to guide the SA Navy wrt products and other information available on relevant issues. The Defence Industries work in partnership with the SA Navy to produce and support equipment in its inventory.



## FUTURE REQUIREMENTS

Technology and globalisation has resulted in some distinct trends that can determine how maritime operations could be conducted in the future. Among the more important trends that will affect the SA Navy are indicated below.

- a. With no foreseeable conventional threat existing against South Africa, a large emphasis will be on humanitarian support within South Africa and further afield within Africa itself. This support can take the form of peace keeping and peace building operations during and after time of conflict in the country concerned, or to assist in relief operations during natural and man-made disasters.
- b. Forces are more effective when operating jointly or as part of a multi-national force. This means that the forces are to be connected in order for information to flow for correct and speedy decisions to be made. The SA Navy will need to ensure that its information systems are interoperable with those of the other Services of the South African National Defence Force (SANDF) and with the other Navies with which it is likely to operate in multi-national operations. The internal information network is to ensure speedy and accurate flow of information.

- c. Together with being connected to a network, there is the requirement for good situational awareness. This implies that sensors are to be employed to effectively provide timely and accurate information in areas of operations. These sensors should be both ship-borne and ship-independent sensors. The sensors are to be capable of surveillance of beneath and above the surface. Safety of the person has become paramount. Therefore unmanned sensors in the form of unmanned aerial vehicles (UAV) and autonomous underwater vehicles (AUV) are likely to be in the SA Navy inventory of the future.

## **FUTURE CAPABILITIES**

South Africa will be involved in peace missions in Africa for the foreseeable future. The types of tasks that the SA Navy could be required to conduct in support of the missions in Africa are as follows

- Showing an early presence in a “conflict” area, which will be on land. As it will take time to sail from a home port to the area concerned, pre-positioning of the land forces at sea and poise can be used to have the forces readily available.
- The SA Navy can sustain and support the land forces from the sea by providing logistic, medical and rest and recreation facilities. These facilities can also be used in times of natural disasters (floods, fires, drought, etc).
- Should the need arise for refugees or RSA nationals to be evacuated from land, a ship could be used as a safe haven for the evacuees.
- Where the area of operation may be considered to risky to have a Command and Control post ashore, a ship alongside or close-inshore can provide a safer command and control post facility as it could be fairly immune to attacks.

With the vast coastline of the RSA, the SA Navy and its South African maritime partners, mentioned in Chapter 2, do not have sufficient resources for effective surveillance and to patrol the maritime areas of responsibility effectively to prevent across border infiltrations and criminal activities taking place.

To close the capability gaps mentioned above, the following capabilities are required in the future.

**Sea Lift/Combat Support Capability.** The SA Navy does not have a suitable platform to carry out the missions described above. By acquiring a suitable platform to project forces ashore, and to provide the necessary medical and logistic support in times of disasters mentioned above, the SA Navy will be in a better position to satisfy the Military Strategic objective to promote peace, security and stability in the region. For this reason the acquisition of a Landing Platform Dock or Landing Helicopter Dock is planned for future.

**Maritime Surveillance Capability.** Modern methods of conducting maritime surveillance in the future need to be investigated. The traditional maritime patrol aircraft is still effective, but the trend is to use unmanned aerial vehicles (UAV). These can be launched from ashore or from sea. Another system that can be used to provide continuous maritime surveillance is a long-range shore-based surveillance system, which could be radar, or another capability that can perform the same function. The requirement for maritime surveillance is not purely a SA Navy requirement, but an interdepartmental requirement as the SA Police Service and Marine Coastal Management also require maritime surveillance. The use of the AUV is a general SANDF requirement where it can be shared between the different Services of the SANDF. The aforementioned means that a viable solution to the maritime surveillance capability gap is a joint approach between the SANDF and other Government Departments. It is not only an SA Navy concern and solution.

**Multi-Purpose Hulls.** In order to ensure a secure maritime region along the long RSA coast and to assist other countries in securing their maritime regions, the SA Navy needs suitable patrol vessels that can be used in other roles of diving support, being a platform to support portable mine countermeasures equipment and any additional collateral tasks. Acquiring multi-purpose hulls, where common hulls are used for vessels that are configured for different roles, will reduce running and maintenance costs. The hull design could also be used by other African countries, resulting on more interoperable equipment and therefore, an opportunity for closer co-operation between African Navies. This, plus the use of commercial-off-the-shelf (COTS) equipment will reduce the costs of the vessels.

## **NAVY PLANNING**

The SA Navy follows the SANDF Strategic Direction Process in deriving its plans for the future. The annual Navy Business Plan is promulgated providing the budget of the SA Navy for the following 3 years.

The longer term plans with respect to the acquisition of capital equipment is provided on the Department of Defence's Acquisition Plan. This plan indicates the intention of the SA Navy's capital acquisitions for the following 20 years.

The SA Navy's short to medium term goals are, therefore identified during the SANDF Strategic Direction Process and promulgated as a plan in the annual SANDF Strategic Business Plan. The long term plans and goals with respect to future force designs are identified during periodic Defence and Navy Reviews and are planned for in the Acquisition Plan.