

should be directly involved in defining the indicators, as well as their dimensions and scale. These tasks demand the attention of a skilled staff who, ideally, might make choices from a pallet of indicators already constructed by analysts and other specialists based on extensive research and practical experience. These matters are of continuing interest.

### DEVELOPING AN INTERVENTION PLAN

As mentioned above SNDC adopted the NATO Guidelines of Operational Planning (GOP) to support her operational planning activities. In doing so Sweden discovered that the procedure lacked mechanisms to trace the internal processes (which we refer to here as 'black box' processes) used by a staff when developing planning products. SNDC then undertook studies of the nature and location of this demand in the overall operational process. These studies showed that the NATO Guidelines of Operational Planning was a procedure that needed additional software support. Identified needs included the following.

- The processes and procedures for assigning planning tasks as well as the product or output created by those tasks should be able to be stored, retrieved, altered, and stored again.
- The product and information on the context within which the plan was developed as well as all relevant planning products created by a planning staff should be able to be used on-demand in a distributed, group-oriented, manner.

The 1999 version of the NATO GOP has been interpreted according to SNDC strategic and operational procedures. Although this was well documented it was not really sufficient to SNDC needs. This led to requests to industry in order to identify the ways in which industrial processes trace who-does-what? when? where? how? and why? within an overall organization. This request led to the identification of the Quality Function Deployment (QFD<sup>2</sup>) methodology as a possible solution to the needs identified above. The QFD methodology has been demonstrated both to cut costs and to reduce the length of the time-to-market period of manufactured goods. The Defence College has supported research activities that interfaced the QFD technology with the NATO GOP procedure and provided enhanced functional capabilities for the overall entity. These activities led to the production of the DMSCupol facility, which is described in more detail below.

### COURSES OF ACTION ARE PRODUCED IN DMSCUPOL

DMSCupol consists of many interacting components. The output of some of those capabilities that are responsible for generating the schema for the operational planning process of DMSCupol are illustrated in Figure 3. All DMSCupol documents are stored within a folder hierarchy, elements of which are shown in Figure 4. The core of the facility is a networked client server-based document management system (DMS). All storage, retrieval, and on-line and off-line functional capabilities are interfaced through an XML-based schema format.

<sup>2</sup> QFD was also used to structure The Defence of the Homeland process.