

Although it may have more than one geographical location, the weapon center would be a self-contained organization in that it would perform research and development, with feasibility models as an important product.

About 70 percent of the center's professionals would be devoted to creative in-house engineering. Although contracts would be awarded, the fundamental development engineering would be accomplished within the center. The center's specialists would participate in the determination of military requirements associated with its mission; would be involved in the initial procurement of equipments; and would provide support to the procurement agency when large-scale production is achieved. The director of the center would have direct control over all the resources required, such as funding, manpower and facilities, and he would report at a sufficiently high level that he could ensure the required "R&D environment" and could participate readily in important policy decisions.

The overall performance of the center would be critically evaluated periodically to guarantee that the center is a competitive organization with high performance standards and achievements.

To this end, the Navy has recently taken a series of steps to consolidate and realign a number of existing organizations, creating centers of critical size that will deal with the problems of major Navy systems and subsystems. Examples of actions already taken are as follows:

The David Taylor Model Basin and the Marine Engineering Laboratory have been combined to form the Naval Ship R&D Center, with the responsibility for advanced ship concepts.

NOTS (Pasadena), segments of the Navy Electronics Laboratory, and several other smaller Navy elements have been administratively combined into the Naval Undersea Warfare Center.

NOTS (China Lake) and the Naval Ordnance Laboratory (Corona) have been unified into the Naval Weapons Center, with broad responsibilities for air-to-air and air-to-ground warfare.

The Army has developed a long-range plan to consolidate many of its medical, materials and technology-oriented organizations. In addition, two weapon-center-like organizations are under study—an Air Mobility Center and a weapon center with broad responsibilities in the area of gun systems, fire-control systems and related subsystems.

The Air Force has under consideration the desirability of combining a number of activities to create an Armament Weapon Center concerned with conventional air munitions.

I don't want to leave the impression that there is complete unanimity on the weapon-center concept, for that is not the case. Advocates are sure that the creation of this type of organization would bring enormous benefits to the DoD. They see new opportunities for optimum concentration on the identification and solution of critical military problems. The combined mission—discipline approach would enable the center to serve as a quick-reaction facility and to be particularly responsive during crises or war. Such an arrangement is believed to enhance the systems approach and would provide a better basis to arrive at optimum solutions to problems independently of technical-specialty bias, and in addition would orient researchers and technologists toward more meaningful and productive areas of work. Finally, a center's performance would be much easier to assess, because its end products could be tested and evaluated.

Those who oppose this concept see penalties in the form of cost, time delays, personnel attrition, etc., because of this fundamental change in organizational philosophy. Considerable duplication of effort is foreseen because of the commonality of technical disciplines to many military problem areas, unless a management system is created to minimize this. Further, there would be a tendency toward monopoly or overprotection under such an arrangement.

In planning future centers of this type, recognition must also be given to the tremendous competence that has been created within our industrial base, and means to continue to exploit this competence must be an inherent part of the weapon-center concept. Work by the in-house scientists and engineers should be directed toward areas in which in-house competence already exists or could logically be extended.

In any event, the Defense laboratories of the future, regardless of their mode of operation, will become fully accepted members of the top-level management team and, in addition to their more traditional functions, will take on expanding roles to: