A NEW CONCEPT OF OPERATIONS FOR NAVAL TRAINING EQUIPMENT CENTER

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It is often observed that the only constant thing in life is change. In keeping with this truism, during the past year the Center has undergone a management overhaul. Emerging from this process is a new concept of operation, which places the Director of Plans and Programs firmly in control of the management of the Center's Technical Program.

For many years the Center has recognized the various disciplines required to produce a successful simulator or product. Accordingly, each project was assigned to a team composed of a Training Specialist, Engineer, Human Factors Specialist, Integrated Logistic Support Specialist and a Contract Specialist. The combined contributions of these teams along with their counterparts in industry have produced a long list of successful simulators and have contributed greatly to the readiness of the Fleet.

Each of these specialists represented a segment of line management. There was no one truly at the helm. As the project progressed from phase to phase one specialist or another became the dominant figure within the team. The team concept still plays a vital role in the new concept but the facilitating type of decision-making common to line organization management has given way to a matrix-type organization.

In today's concept of operation, project decision-making has been established at the lowest responsible level thus providing many more decision-making points than in the old conventional organization. In the planning stages of a project a Project Master Plan (PMP) is generated at the direction of a Program Control Officer. When annual funding becomes available, the project plan is turned over to either a Project Director or Acquisition Director for the execution of the plan bounded by the parameters of funds, time and manpower. In this concept, project/team management is made the specific responsibility of the Project Director or Acquisition Director at the working level. Project Directors and Acquisition Directors are given commensurate authority to execute their assigned tasks and are responsible to the Director, Plans and Programs, for their successful completion. The line organizations of the Center function to establish standards and to insure the continued excellence of the technical product as well as to provide the required support areas.

So far we have covered some of the highlights of the new concept but for a complete understanding it is necessary to relate the organization and procedures of NAVTRAEQUIPCEN in order to make the concept more meaningful in depth. Figure (1) shows the Center Organization Chart. You can readily identify the Commanding Officer and staff offices as well as the major departments. The project team members assigned to a project are organizationally assigned to the various departments. The human factors and research specialists are in the Research and Technical Department, N-21. The engineers and training specialists are in the Engineering Department, N-22, and the Instructional Systems and Media Department, N-23. The integrated logistic support specialists are in the Logistics and Material Management Department, N-4, while the contract specialists are located in the Procurement Services Department, N-6. The focal point of the organization which directs the efforts of all to accomplish the Technical Program is the Plans and Programs Department, N-3.

The Plans and Programs Department, see Figure (2), contains three divisions. The Program Planning Division, N-32, acts as the central clearing house for all external navy interface and specifies/directs the required internal action to accomplish a project whatever it may be (product or service). The Plans and Operations Division, N-31, manages the workload situation. Through an ADP control system this code monitors the resources being applied to on-going projects. Acting as a control valve, it validates the ability of the Center to take on more projects at any given time or indicates the adjustment or additional manpower required to accomplish a Fiscal Year Program. Once a project is specified, funded, validated and assigned a project team, the Project Direction Division, N-33, through the Project Directors and Acquisition Directors, controls the accomplishment of the projects in accordance with a predetermined PMP.

The Technical Program of the Center is composed of individual, work-unit size projects. Each project is assigned to a Project Director if it is considered a major/critical task and so assigned by the Commanding Officer, while all other routine tasks are assigned to an Acquisition Director who normally also serves as the engineer on the project team. So, every project has a Project Director or an Acquisition Director who is responsible to the Director of Plans and Programs for the timely management of his tasks. Figure (3) illustrates this management concept which is new to the Naval Training Equipment Center.

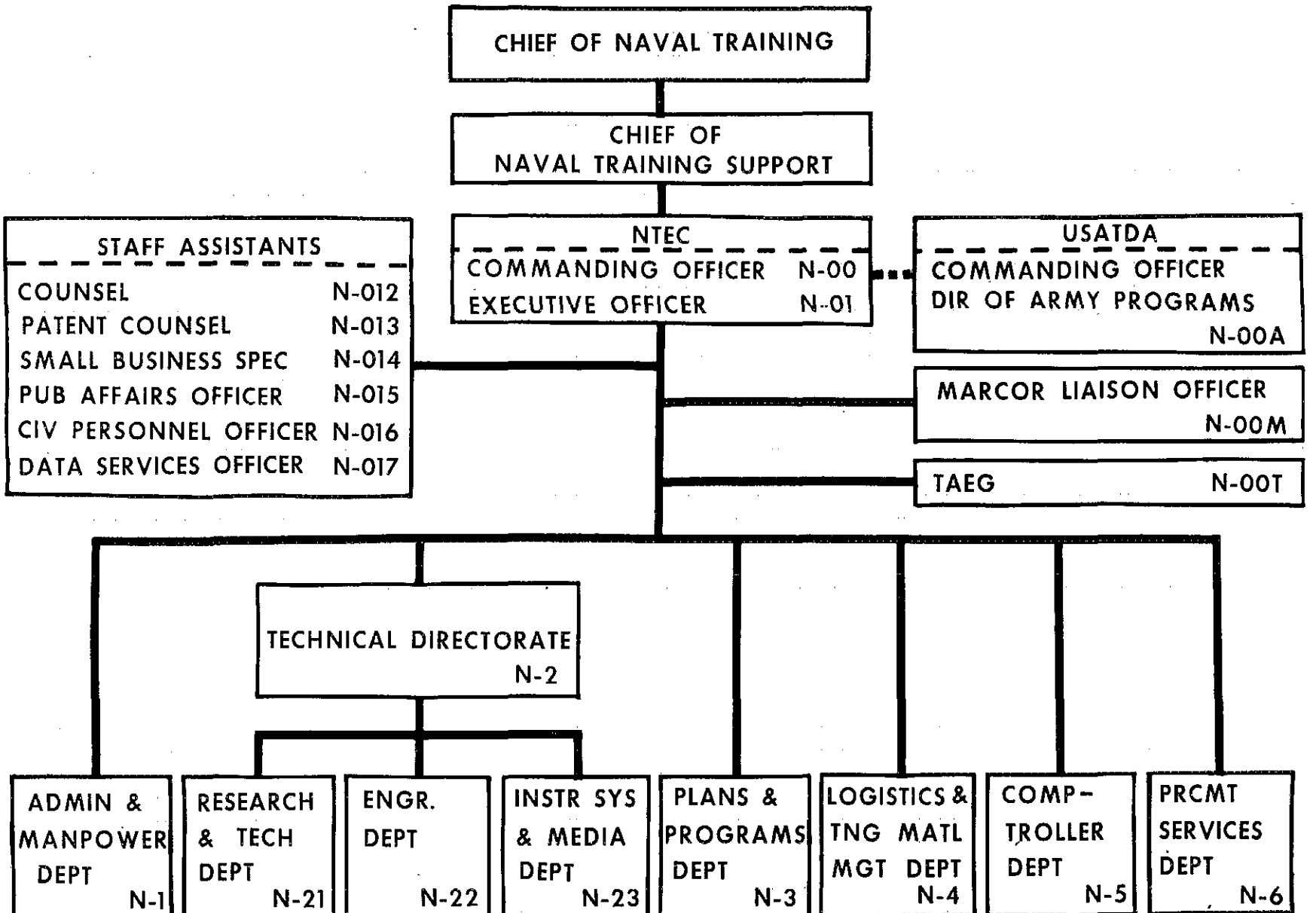
CHIEF OF NAVAL TRAINING
CHIEF OF NAVAL TRAINING SUPPORT
NTEC
COMMANDING OFFICER N-00
EXECUTIVE OFFICER N-01
STAFF ASSISTANTS
COUNSEL N-012
PATENT COUNSEL N-013
SMALL BUSINESS SPEC N-014
PUB AFFAIRS OFFICER N-015
CIV PERSONNEL OFFICER N-016
DATA SERVICES OFFICER N-017
USATDA
COMMANDING OFFICER
DIR OF ARMY PROGRAMS
N-00A
MARCOR LIAISON OFFICER
N-00M
TAEG N-00T
TECHNICAL DIRECTORATE
N-2
ADMIN & MANPOWER DEPT N-1
RESEARCH & TECH DEPT N-21
ENGR. DEPT N-22
INSTR SYS & MEDIA DEPT N-23
PLANS & PROGRAMS DEPT N-3
LOGISTICS & TNG MATL MGT DEPT N-4
COMP-TROLLER DEPT N-5
PRCMT SERVICES DEPT N-6

Figure (1)

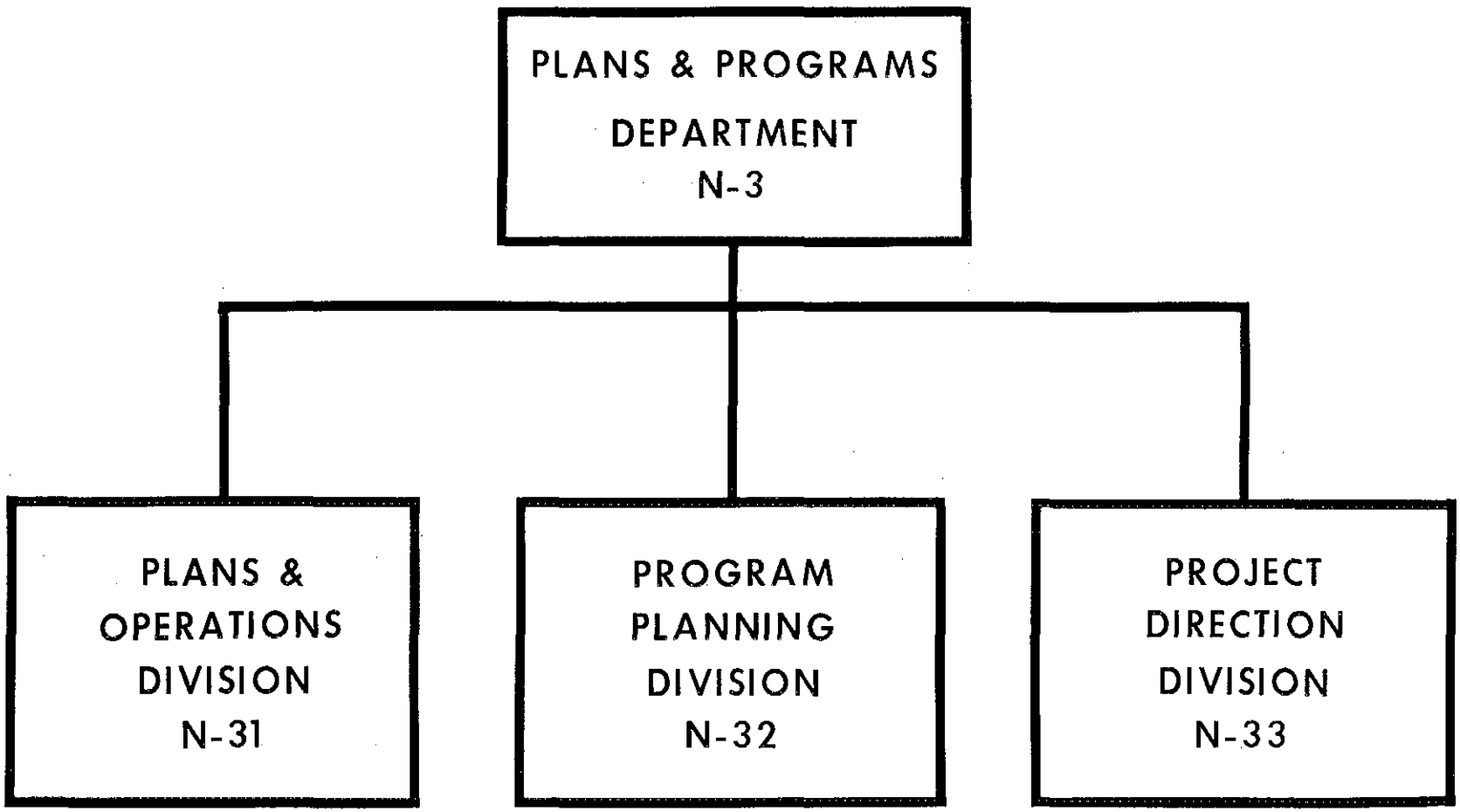
PLANS & PROGRAMS
DEPARTMENT
N-3
PLANS &
OPERATIONS
DIVISION
N-31
PROGRAM
PLANNING
DIVISION
N-32
PROJECT
DIRECTION
DIVISION
N-33

FIGURE (2)

NTEC MATRIX ORGANIZATION

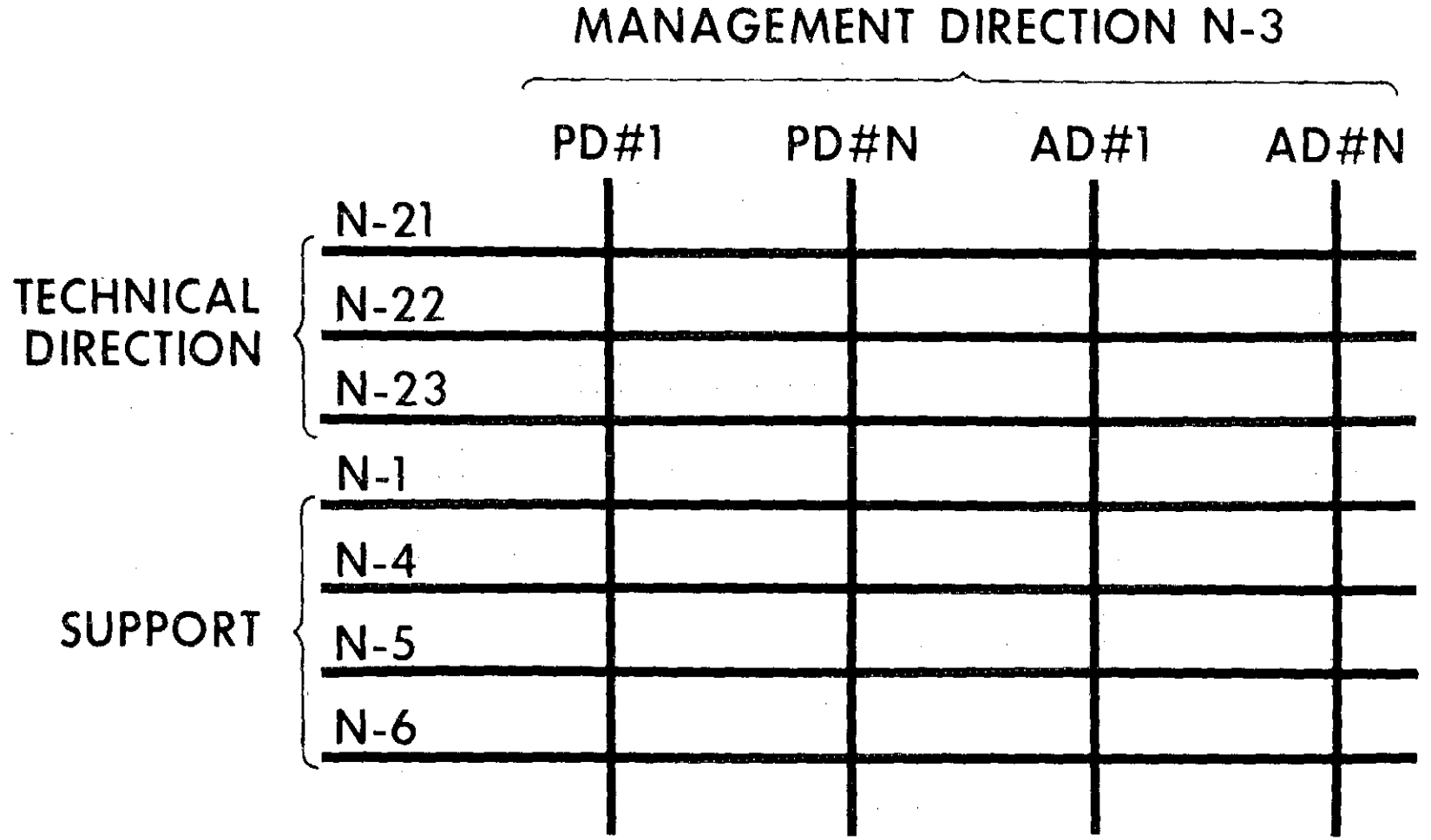

FIGURE (3)

Some of the titles which are vital to the new concept of operations require an explanation of what they do and their relationship to each other. The Program Control Officer (PCO) is oriented to a warfare area such as Air, Surface or Submarine. He is engaged in identifying new work projects, getting project planning accomplished and interfacing the plan with the training agencies. He is responsible for planning on a fiscal year basis covering five years into the future. After obtaining funding support, he programs the current fiscal year for implementation within the Technical Program of the Center. Each program has a few major/critical projects. To insure positive direction for accomplishment, a Project Director (PD) is assigned. He is assigned the responsibility and authority to direct the successful completion of his project. All other projects not assigned to a PD are assigned to an Acquisition Director (AD) who has the same project responsibility for his project except that normally there will be in existence a PMP which he implements. In addition to his assigned projects, the PD is assigned as cognizant officer over an area of expertise such as EW, ASW, etc. The AD's are administered by N-3 through a cognizant officer in accordance with their assigned areas.

The need for training simulators is identified in several ways. When new weapons systems enter the fleet, personnel must be taught to operate them; tactics changes and new maintenance problems are surfaced. As operational doctrine and tactics change, fleet training requires adjustment which is sometimes solved by training simulators. Within the functional training commands, training problems arise as they strive for more efficient and cost effective training. Regardless of where the need is identified, the potential solution of a training simulator enters the Center in Code N-32. See Figure (4). Here the PCO determines whether or not we have an existing trainer in inventory that could provide the solution. When it is determined that a new simulator is required he prepares a directive-type action document called a Work Assignment (WA). In it the required PMP elements are defined and the level of effort stipulated. The WA is usually issued to a project planning group in N-22.

A Project Planning Team is formed consisting of an Education Specialist, Engineer, and PD, if he is assigned. This team evaluates the training problem, identifies the learning skills, determines the degree of environmental simulation and makes the necessary trade-off analysis to provide a functional concept documented in a Military Characteristic (MC). The MC then forms the basis for the preparation of a Technical Approach (TA) which defines

THE PROJECT PLANNING PROCESS

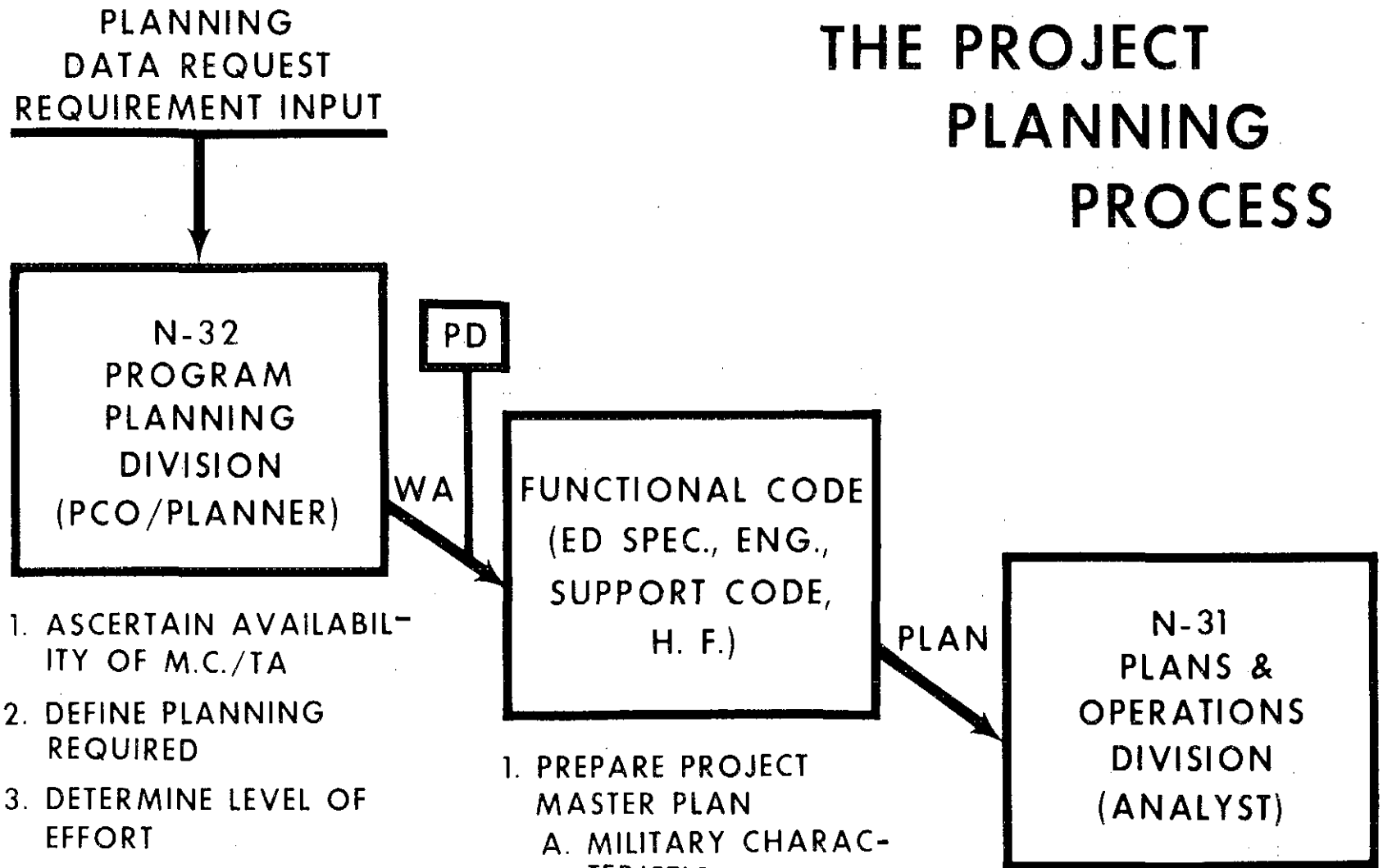

FIGURE (4)

technically how the simulator will be built. It identifies the required subsystems, basic configuration, as well as the high risk areas. While the TA is being prepared the MC is being coordinated with the cognizant training agency and funding agency. They determine if the simulation described is indeed what they had in mind to solve the training problem. The MC and TA combined form the functional baseline from which all other elements of a PMP are derived. These elements include a complete schedule estimate, a manhour estimate, a cost estimate and a military construction estimate, if required.

The Project Master Plan is sent to the Plans and Operations Division, N-31. Here the plan is validated in terms of necessary in-house manhours to do the complete project. A preliminary assessment is made to determine whether or not the Center could do the project in the time frame required. If the funding/start date is known, resources will be reserved to do the project.

The complete PMP is then sent to the PCO for external coordination as necessary to establish the project as a firm requirement of a training agency and a budgeting plan by the funding agency. Selected portions of the PMP are provided to the training/funding agencies to support their decisions and provide budget backup information. Figure (5) illustrates the acquisition process which starts when fiscal year funding information is made available, thus assuring that funding will be made available. The period of time required for decision making and funding can vary from immediate action in the current fiscal year to its entry into the budgeting process which may take several years. To make the job of tracking projects, actually hundreds, in this stage easier and orderly the Center prepares Planning Summaries by warfare area. These are used as references with the Navy's decision-making process.

At the time funding becomes available, a Task Assignment and Directive (TAAD) is issued by the PCO. A project acquisition team is formed and a PD/AD is designated. The PMP is executed by the preparation of a Procurement Package, a request for proposal and a proposed evaluation plan. After industry has been solicited and proposals are in-house, the proposal evaluation report is prepared and resulting negotiations are entered into. During the contractor performance period, through to delivery, the PD/AD and their team monitor the contract and technically approve industry's plans, reports and tests as specified in the contract.

THE PROGRAMMING/ ACQUISITION PROCESS

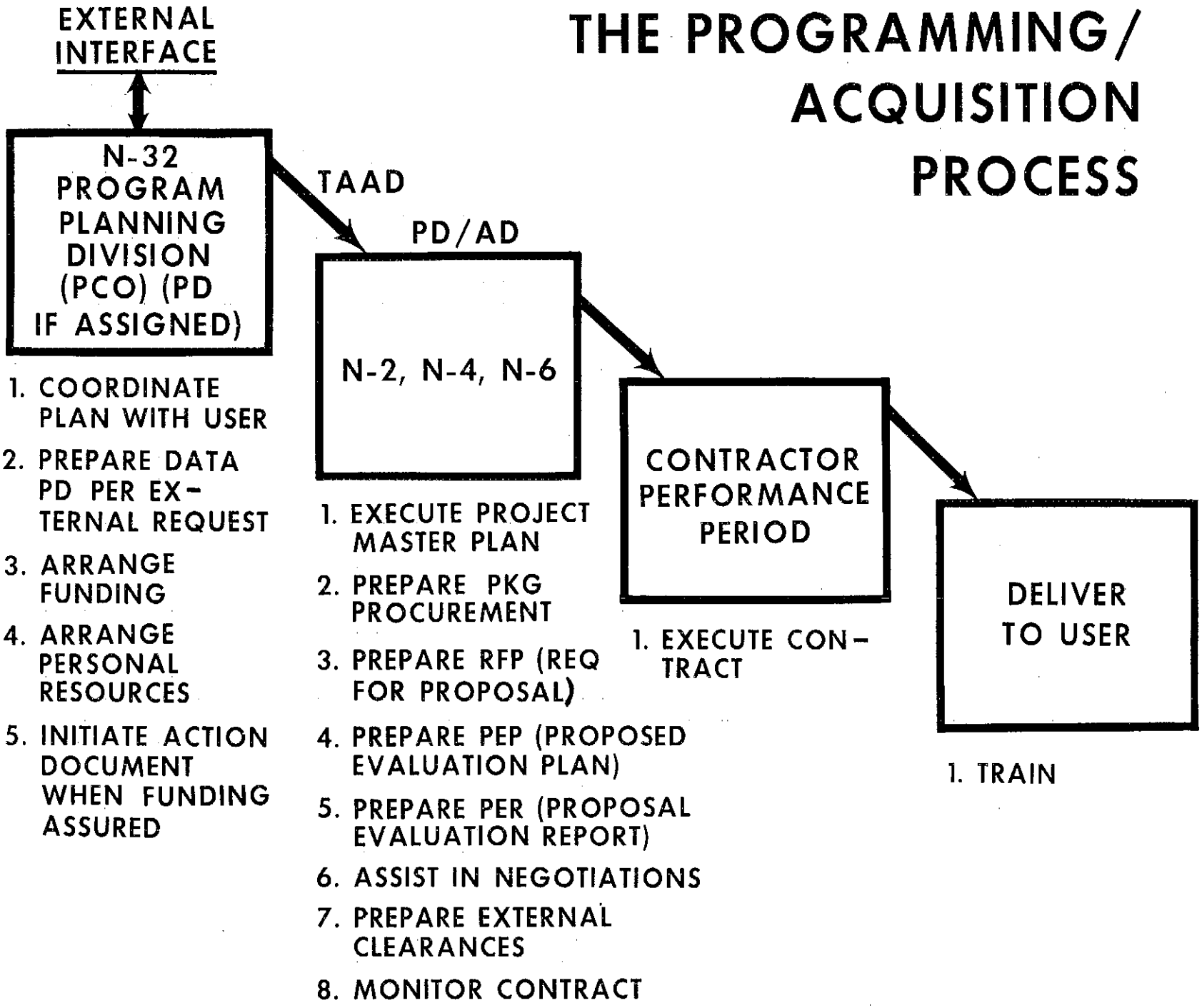

FIGURE (5)

If you have the impression that the PD/AD are mighty important people around the Center these days, you are right. They are responsible to the Commanding Officer through the Plans and Programs Department. They are totally responsible for carrying out assigned project master plans to a successful completion. They provide a single point of contact for their projects and have been given commensurate authority to carry out their assignments.

When a PD or AD is assigned a multimillion dollar project or a project critical to fleet readiness, he can get into some mightly lonely positions. For this reason, and to make available to him the accumulated expertise of the Center, a Procurement Advisory Board (PAB) has been established. Membership on the board consists of the Executive Officer who is its chairman, the Technical Director, his Department Heads as well as the Director of Plans and Programs and Procurement Services. Counsel and Small Business are also represented on the Board. The function of the board is advisory only and their recommendations are not mandatory actions for the involved PD/AD. At any critical stage of the procurement process, such as the request for proposal, the proposed evaluation plan or the proposed evaluation report, the PD/AD can request the chairman to convene the board. Projects exceeding one million dollars are automatically taken before the board.

This is how the Planning, Programming and Acquisition of training simulators is achieved and how the Plans and Programs Department of the Naval Training Equipment Center functions. We are off to a new concept of operation that hopefully will prove as satisfactory for you in industry as it is working out within the Center.

ABOUT THE AUTHOR

CDR T. E. TODD, USN, assumed direction of the Plans and Programs Department of the Naval Training Equipment Center in October 1972, where he directs the implementation of the Center's Acquisition Program. He advises and assists the Commanding Officer in the development and fulfillment of short and long range plans; develops and recommends policy and exercises overall management and centralized control of the Acquisition Program of the Center.

CDR Todd began his naval career with his enlistment following graduation from high school as an honor student in 1945. After 1 year as an enlisted man, he was selected as an officer candidate and for flight training. This training was prefaced by 2 years of academic training at Rice Institute, University of Houston, and Pikeville College in Kentucky. He reported for flight training at Pensacola in 1948, receiving his commission in 1950. During his career as an officer, he served with a Navy Patrol Squadron at Quonset Point, Rhode Island; served as Flight Instructor at Hutchinson, Kansas; as Air Transport Officer, Norfolk, Virginia; attented Naval *Postgraduate School, Monterey, California, from which he received a B.S. degree* with honors; served as Legal Officer for the Commanding Officer, Naval Air Facility, China Lake, California; as Maintenance Officer in a Patrol Squadron SP2H Neptune Aircraft; attended a 6-month course of instruction at the Armed Forces Staff College, Norfolk, Virginia; served on the Staff of SACLANT, Norfolk; served as Commanding Officer of Patrol Squadron EIGHT at Patuxent River, Maryland and as Operations Officer on Staff of Commander Fleet Air Wing ELEVEN prior to coming to the Naval Training Equipment Center where he initially served as Military Associate to the Program Control Department Head.