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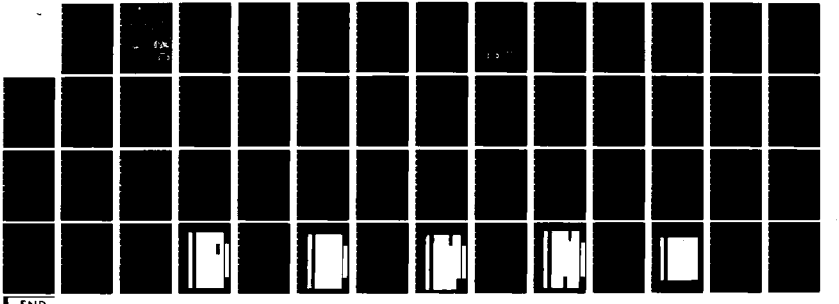

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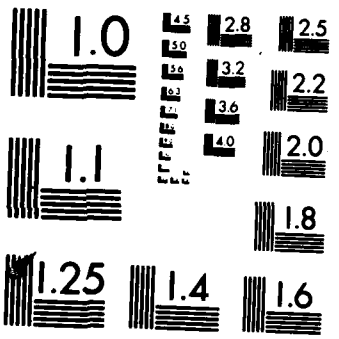

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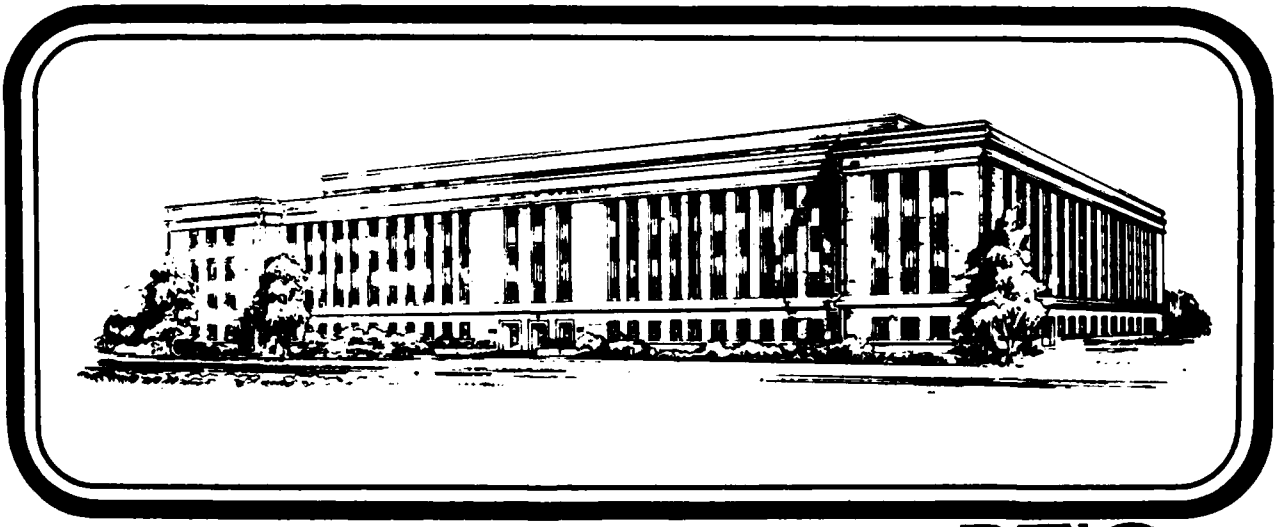
MOBILIZATION AND DEFENSE MANAGEMENT TECHNICAL REPORTS SERIES

DEPARTMENT OF DEFENSE (JCS) SUSTAINABILITY MEASUREMENT MODEL: HOW TO "GRADE" BUDGET PROPOSALS VERSUS SATISFACTION/ FIXES APPLIED TO MOST CRITICAL WARFIGHTING CONSTRAINTS



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SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER NDU/ICAF 83/019	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)* (JCS) DEPARTMENT OF DEFENSE SUSTAINABILITY MEASUREMENT MODEL		5. TYPE OF REPORT & PERIOD COVERED IR #23, AY 82/83 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) JAMES H. JOBE, LTC, USA		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS INDUSTRIAL COLLEGE OF THE ARMED FORCES FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS INDUSTRIAL COLLEGE OF THE ARMED FORCES FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		12. REPORT DATE MAY 1983 13. NUMBER OF PAGES 30
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)* NATIONAL DEFENSE UNIVERSITY FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		15. SECURITY CLASS. *(of this report)* UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

UNLIMITED APPROVAL FOR PUBLIC RELEASE

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

N/A

18. SUPPLEMENTARY NOTES

N/A

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

N/A

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

This paper addresses the problem that there is no standardized, existing system for measuring sustainability within the armed services nor between each service and the OSD. A system is required which will aggregate the service assessments of sustainability into one OSD sustainability assessment which can be understood OSD-side and which allows meaningful decision making about resource allocation to occur. Also, there is great need but no systematic way to relate sustainability deficiencies and the POM entries which are designed to address the shortfalls.

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SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

NATIONAL DEFENSE UNIVERSITY

MOBILIZATION STUDIES REPORT
DEPARTMENT OF DEFENSE (JCS) SUSTAINABILITY MEASUREMENT MODEL

by

James H. Jobe, LTC, USA

A Research Report Submitted to the Faculty

in

Fullfillment of the Research

Requirement

Research Supervisor: LTC Charles Sabin, USA

The Industrial College of the Armed Forces

MAY 1983

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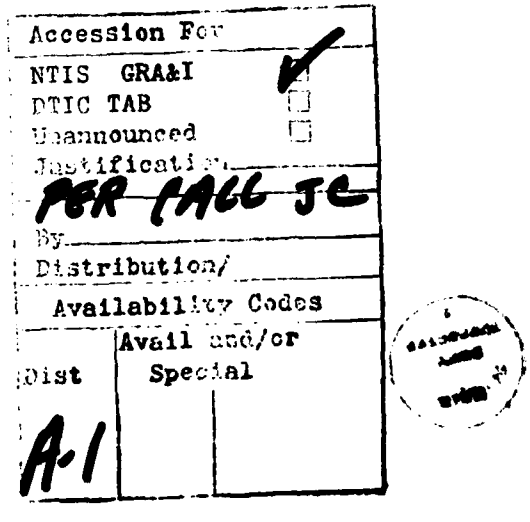
DISCLAIMER-ABSTAINER

This research report represents the views of the author and does not necessarily reflect the official opinion of the Industrial College of the Armed Forces, the National Defense University, or of the Department of Defense.



ABSTRACT OF STUDENT RESEARCH REPORT
INDUSTRIAL COLLEGE OF THE ARMED FORCES

NAME OF RESEARCHER (S)	TITLE OF REPORT
James H. Jobe LTC (P), USA	OSD Sustainability Measurement Model
SECURITY CLASSIFICATION OF REPORT Unclassified	**REPORT NUMBER** M

ABSTRACT

Problem Statement: This paper addresses the problem that there is no standardized, existing system for measuring sustainability within the armed services nor between each service and the OSD. A system is required which will aggregate the service assessments of sustainability into one OSD sustainability assessment which can be understood OSD-wide and which allows meaningful decision making about resource allocation to occur. Also, there is great need but no systematic way to relate sustainability deficiencies and the POM entries which are designed to address the shortfalls.

Findings/Conclusions: A system exists which, when modified, will accomplish the following:

1. Provide a standard method for evaluating sustainability in each service for both pre- and post-deployment time periods.
2. Provide a simple, standard method for presenting these deficiencies to service leadership for guidance in building the POM.
3. Provide a method for aggregating warstopping deficiencies (shortfalls) and the corrective actions for review at OSD level.
4. Provide a comparison between pre- and post-POM to evaluate the extent to which the warstopping deficiencies are resolved.
5. Provide a system which "grades" the POM as it is prepared for submission.

Recommendations:

1. That the system described herein be submitted to the OSD level office which has the responsibility for measuring sustainability.

2. That thesystem be implemented from the Office of the Secretary of Defense downward throughout the Department as the primary methodology for measuring, reporting on, and correcting deficiencies in sustainability.

THIS ABSTRACT IS UNCLASSIFIED

EXECUTIVE SUMMARY

This study is based upon an existing system for measuring sustainability, it adapts the model for use in all services and develops an additional model for use at OSD/JCS level which is based upon inputs from each of the service models. The system uses a three dimensional model which plots the ability of each service to sustain it's forces over time and during one or more scenarios, thus illuminating the impact of sustainability deficiencies on the ability of OSD/JCS to wage war successfully.

This system utilizes existing data and personnel in each service in the compilation phase. It relies upon the resident expertise in the staff to evaluate the service's capacity to sustain. This system is used before the POM process begins....as guidance, and after the POM is completed...as a method of evaluating how well the program meets sustainability needs. The results of the compilation must be vetted by field commanders prior to its use in order to provide credibility.

Each service will input data in a specified format to OSD to include the time period matrix and a base data listing of service identified "most critical" deficiencies. At the OSD/JCS level, the model can also be used before and after the budget is submitted to detect success or failure of the budget process to address critical sustainability deficiencies.

Chapter 1. INTRODUCTION

1.1 At every level of management within the Department of Defense, one of the major and most critical annual events is the submission of the proposed budget. As lower level submissions are aggregated in preparation for the next higher level budget, the over-riding concern becomes "How well are we preparing our agency to perform it's mission?" "How efficiently are we allocating our scarce resources ?" "What have we missed that may have been critical?"

1.2 Once the budget submissions have been "rolled up" or aggregated, the higher level managers are required to make decisions based on the macro-level data and they do not have a system to illuminate problem areas which perhaps weren't addressed or were inadequately addressed in the budget cycle. Fiscal constraints on the Planning, Programming, Budgeting, and Execution System(PPBES), there are never enough dollars to fix everything so we strive to achieve the "most bang for the buck" or we are constantly asking "How much readiness will XXX million dollars buy?" We just don't have a system which answers these questions at the macro-level. The purpose of this paper is to provide a system which measures the sustainability of a military force against a scenario or multiple scenarios. This system illuminates to the top level decision makers those areas which are major constraints to success in warfighting and the corrective action required/taken in each area. In effect, this

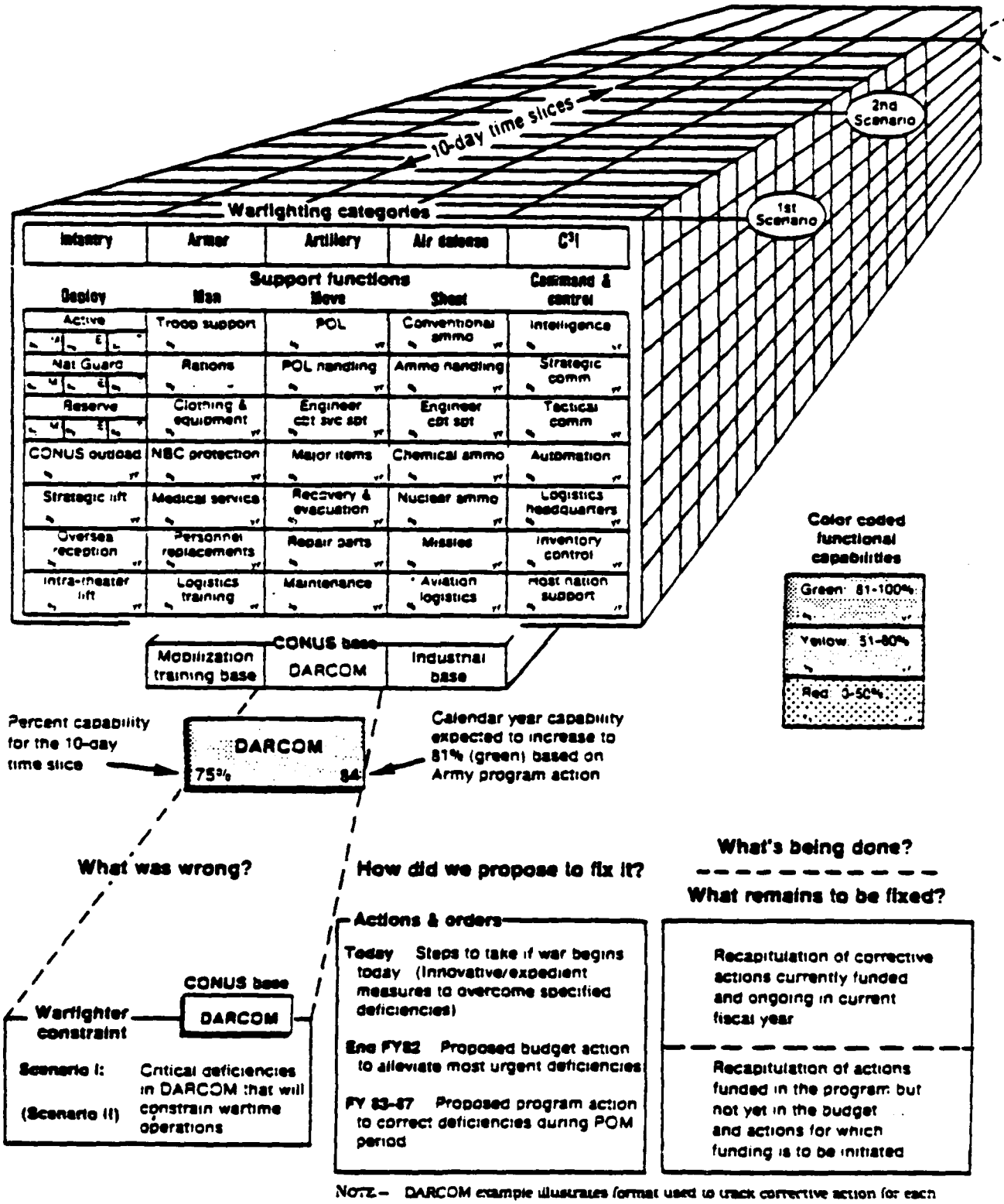
system spotlights the "lack of a nail for which the war was lost" and what, if anything, is being done to resolve the problem.

Chapter 2. SYSTEM MODEL DESCRIPTION

2.1 This model is operating in the Army Staff as described in succeeding paragraphs and as displayed in Figure 2-1.

2.2 Either a single scenario or multiple scenarios are chosen based upon mission and most likely occurrence. The scenario (s) are then divided into segments of 10 day periods each. There is one matrix slide for each 10 day period of time. For each 10 day period, the model then requires measurement of how well or poorly each of the 38 functions (matrix elements) is capable of supporting the combat operations of the five warfignting categories: Infantry, Armor, Artillery, Air Defense, and Command/Control/Communications/Intelligence (C3I). This particular adaptation of the model (Army) also groups the support functions into one of five support/sustainability categories: Deploy, Man, Move, Shoot, Command and Control. The remaining support/sustainability functions are shown as Continental United States (CONUS) Base.

2.3 Each of the 38 functional blocks displays the measured capability to support the forces deployed in the specific 10 day time period. A color code is used to reflect the degree of capability. GREEN represents a capability of 81-100 percent, YELLOW represents 51-80 percent, and RED represents a capability of less than 50 percent. The percentage in the lower left hand corner of the block is the functional proponent's estimate of the percentage of capability available to sustain those forces deployed in that time period. The number in the right hand



NOTE – DARCOM example illustrates format used to track corrective action for each of the J8 support functions.

Source: DCSLOG unpublished briefing material.

FIGURE 2-1

corner of each block provides the calendar year in which the agency's program will fix or improve the capability to sustain to at least the 81 percent level (GREEN.) The letter "N" appears in the lower right hand corner if insufficient or no program funding has been applied to correct the deficiency.

2.4 These color coded time slices or displays provide a basis for corrective actions. An analysis of the percentages or color codes will show where a shortfall exists in sustainability or where it will occur. Further analysis of the time periods collectively will display when in the scenario a serious deficiency will occur and which of the major warfighting categories will be affected (Infantry, Armor, Artillery, Air Defense, and Command/ Control/Communication/Intelligence.) Corrective action in terms of a programming activity can apply resources to correct shortfalls if they are critical. Furthermore, when dollars are matched to the shortfalls, it becomes easy to answer the question of what we can buy with XX dollars in terms of readiness or sustainability.

2.5 Each of the 38 functional areas (in Figure 2.1) is monitored normally by a member of the service staff (Army, Air Force, Navy, Marines.) This particular model and it's input is based on the premise that the O-6 level operator is the most knowledgeable person in the service on his/her particular functional area (see para 3.6 for a functional area description.) The input required from each O-6 is an evaluation of the functional area by time period; the assignment of a percent of capability and a color to each time period; an analysis of those

problems causing the deficiency and development of the corrective action required as well as the status of each corrective action if already begun; and finally, restatement of these deficiencies/corrective actions into categories of "What is being done?"...."What remains to be fixed?" (see Example Para 2.8.)

2.6 The sources of these inputs are not new and do not require <u>any</u> new workload although it may require a reordering of assembly processes for data to allow the data to be gathered in a format compatible with the model. The key to this whole process is that the already responsible O-6 is being given another tool with which to accomplish his duties, not just another requirement.

2.7 The methods to be used by the O-6 in his evaluation will be mostly subjective not objective. If the responsible O-6 normally has a quantitative method for conducting his evaluation then so much the better! If not, a great deal of time should not be wasted searching for a quantitative method.....remember this O-6 is <u>the</u> staff expert on the specific subject. We must trust his judgement, even if he errs in judgement by as much as 10% it probably isn't significant and he is still the best available source.

2.8 The data can be recorded in a format as follows:

WHAT MUST BE FIXED?

-(Key bottom line requirements, $$, eaches,
and the year the fix is required ..are listed here)

WHAT CAN BE DONE IF WAR STARTS TOMORROW?

-(Innovative, farsighted ideas to resolve the problems on an emergency basis are listed here)

WHAT IS BEING DONE?

-(Those corrective actions are currently being programmed to fix each situation are listed here)

WHAT REMAINS TO BE FIXED?

-(Those problems which still exist but to which corrective action has not been applied are listed here.)

This format becomes the baseline of information for assessing sustainability. It only needs to be updated semi-annually (see para 2.11) and does not need to be completely reassessed unless the major underlying scenario(s) or the force structure changes in a significant manner.

2.9 Once a particular function is determined to be a war-stopper (those points in time when warfighting cannot continue to be sustained because of diminished or lack of capability), the emphasis of all resources may be applied to solving this problem, or it may be decided that the problem is acute but it is not going to be addressed with resources. These are decisions made at a level of operation higher than that where this model will be developed; however, once a situation is identified as a warstopper, it will continue to be followed in terms of corrective action required until the situation changes (either the problem is resourced or it goes away because of a

mission or scenario change.) For example, the Chief of Staff of a service might recognize a war-stopper as such but decide that it is a very low skill, manpower intensive problem which can be easily solved by the application of manpower.....therefore, the problem does not warrant the use of resources on an emergency basis because the resources will always be available to resolve the problem at a later date if it does become an urgent matter.

2.10 This model automatically prioritizes problems in terms of listing the largest problem which will exist in the earliest time period. That point (earliest occurring..largest problem) then is the highest priority until it is over-ridden by a command decision or it is resolved in another manner.

2.11 The timeliness of the updating and reporting of this model is of considerable importance. The most appropriate times for this model to be updated and reported on are as follows:

The assessment should be made and briefed to all those involved in the program/budget preparation phase prior to starting the process. This will set the baseline priorities which all must strive to solve with the program/budget as submitted.

The second update and briefing should be accomplished as soon as the program/budget submission is "locked up" by each preparing agency. In this manner, the program/budget which is being submitted can be evaluated as to how well or poorly the proposed budget solved the war-stopping problems. In effect,

the model can provide a "grade card" on the program/budget building process.

Chapter 3. ARMY ADAPTATION

3.1 The model used as an example in Figure 2-1 is an Army model. This model was developed by Colonel William H. Mitchell and the author of this paper in the US Army Deputy Chief of Staff for Logistics Office.

3.2 The model has been operated as described in the Army DCSLOG for three years. It was developed for the Vice Chief of Staff, Army (then General John Vessey) under the auspices of the Deputy Chief of Staff for Logistics (LTG Richard Thompson.)

3.3 The model (called the Army Logistics Assessment) is used to brief three and four star level leaders on the Army Staff as well as the Secretary of the Army leadership on problems relating to sustainability.

3.4 This assessment provides a very unique report on the adequacy of the program development process (over-time) within the Army in terms of how well or poorly critical deficiencies are addressed in the budget.

3.5 The assessment also clearly points out critical sustainability shortfalls and the impacts thereof to the senior leaders in the Army just prior to the beginning of their decision making process in the budget preparation at that level.

3.6 As further explanation, it is of interest to understand the depth and breadth of each functional area:

DEPLOY:

Active -The readiness of each component required

WARFIGHTING CATEGORIES

INFANTRY	ARMOR	ARTILLERY	AIR DEFENSE	C3I
DEPLOY	MAN	MOVE	SHOOT	COMMAND & CONTROL
ACTIVE	TROOP SPT	POL	CONV AMMO	INTELLIGENCE
NAT. GUARD	RATIONS	POL HANDLING	AMMO HANDLING	STRAT COMMO
RESERVE	CLOTHING & EQUIPMENT	ENGINEER CBT SVC SPT	ENGINEER CBT SPT	TACTICAL COMMO
CONUS OUTLOAD	NBC PROTECTION	MAJOR ITEMS	CHEM AMMO	AUTOMATION
STRATEGIC LIFT	MEDICAL SERVICE	RECOVERY & EVACUATION	NUC AMMO	CAPSTONE
O/S RECEPTION	PERSONNEL REPLACEMENTS	REPAIR PARTS	MISSILES	INVENTORY CONTROL
INTRA-T LIFT	LOGISTICS TRAINING	MAINTENANCE	AVIATION LOGISTICS	HNS

CONUS BASE

MOB TRAINING BASE	DARCOM	INDUSTRIAL BASE

Figure 3.1

National Guard to deploy in this time period is
Reserves displayed here.

Conus Outload -Addresses any and all outload stations and their personnel and equipment.

Strategic Lift-Evaluates the requirement versus the most likely availability of strategic air/sealift and the timeliness thereof.

O/S Reception -Addresses plans, preparation, unit availability of all overseas reception sites.

Intra-T Lift -Analysis of the availability and readiness of required intra-theater lift from port clearance to destination.

MAN:

Troop Support -All Class VI supplies, bath, graves registration service, and laundry support required.

Rations -All rations (Meal Combat Individual, Meal Ready to Eat, A ration, or B ration)

Clothing & Equipment -All uniforms and other clothing, special cold and/or hot weather equipment.

NBC Protection -All masks, filters, alarms, protective clothing and decontamination equipment and units.

Medical Service-All medical and medical service units and equipment required to support the force to include medical evacuation units.

Personnel Replacements -All replacements (individual/unit)

coming from the mobilization (training) pipeline.

Logistics Tng -Peculiar logistics skills training base requirements.

MOVE:

POL -All POL product required by the force including packaged products.

POL Handling -All units/systems required to receive and distribute POL product to deployed divisions.

ENG CBT SER SPT-Engineer support to keep lines of communications (air, land, and sea) open.

Major Items -All Class VII major end item replacements from war reserves plus combat loss replacements.

Recovery & Evacuation-All units and equipment required to effect battlefield recovery and LOC recovery.

Repair Parts -All repair parts to sustain deployed forces PLL's, ASL's, and combat requirements (differentiate between PLL's and combat requirements since PLL's are based upon peacetime demand.)

Maintenance -All maintenance units and facilities to maintain equipment in theater thru the general support level of maintenance.

SHOOT:

Conventional ammo -All Class V required by the force.

Ammo Handling -All units, equipments, and facilities

required to handle Class V supplies from discharge at the port to the forward deployed unit.

ENG CBT SPT -All engineer units and equipment required to support combat elements.

Chem Ammo -All elements required to provide chemical ammunition in fireable condition to supported forces.

Nuclear Ammo -All requirements for providing nuclear weapons to deployed forces.

Missiles -All missiles 66mm and larger required to support the combat forces.

Aviation Logistics-All related units and aviation peculiar equipment required to sustain aviation in deployed forces.

COMMAND & CONTROL:

Intelligence-All intelligence units and equipment required to develop intelligence for deployed forces.

Strategic Commo-All elements required to effect strategic communications for the deployed force

Tactical Commo -All elements required to insure tactical communications within and between deployed forces.

Automation -All required units and equipment to effect automation support for the deployed forces.

Capstone -Complete identification of all units

to be deployed with those units with which they will operate post-deployment.

Inventory Control -All required units and equipment to effect inventory control at all levels in theater.

Host Nation Spt-All agreed upon support rendered by the host nation.

CONUS Base:

Mobilization Training Base - All required facilities, equipment, men, and units to effect mobilization and training.

DARCOM -All elements of the Army Readiness Command are staffed and organized to support the deployed forces.

Industrial Base -All elements of the industrial base are mobilized and have begun production (assumes War Powers Act has been implemented.)

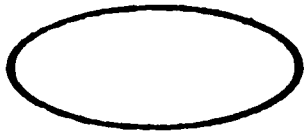
Chapter 4. AIR FORCE ADAPTATION

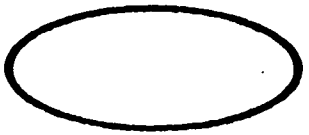
4.1 Figure 4-1 has been developed as a modification to Figure 2-1, which will allow Air Force use of the model as an input device to the DoD model. This adaptation is in the form of the matrix face only. This is an easy to use portrayal of the functional areas appropriate to US Air Force operations.

4.2 The warfighting categories have been changed to TACAIR, AIRLIFT, GND SPT AIR, AIR DEFENSE, AND C3I.

4.3 The operation of this model at the Air Force staff level will serve to illuminate warfighting constraints exactly as did the Army model. For example, if an Ammunition Handling problem in an overseas theater occurred which would cause TACAIR to be out of ammunition, it would show up in the time period when it occurs (the time period block for AMMO HANDLING would be colored red). The ammunition functional area 06 must then analyze the situation to determine whether the problem was manpower, equipment, or a constrained ammunition distribution system and recommend action to correct it (e.g.forward stationing, redistribution, more equipment, etc.). Thereafter, this war stopper would be followed until corrected or otherwise resolved.

4.4 If a decision requires corrective program action, then such action would be initiated. The war stopper would not be





WARFIGHTING CATEGORIES

TACAIR	AIRLIFT	GND SPT AIR	AIR DEFENSE	C^3I
DEPLOY	MAN	MOVE	SHOOT	COMMAND & CONTROL
ACTIVE	TROOP SPT	POL	CONV AMMO	INTELLIGENCE
NAT. GUARD	RATIONS	POL HANDLING	AMMO HANDLING	STRAT COMMO
RESERVE	CLOTHING & EQUIPMENT	ENGINEER CBT SVC SPT	ENGINEER CBT SPT	TACTICAL COMMO
CONUS OUTLOAD	NBC PROTECTION	MAJOR ITEMS	CHEM AMMO	AUTOMATION
STRATEGIC LIFT	MEDICAL SERVICE	RECOVERY & EVACUATION	NUC AMMO	RECONNAISANCE
O/S RECEPTION	PERSONNEL REPLACEMENTS	REPAIR PARTS	MISSILES	INVENTORY CONTROL
INTRA-T LIFT	LOGISTICS TRAINING	MAINTENANCE	AVIATION LOGISTICS	HNS

CONUS BASE

MOB TRAINING BASE	AFLC	INDUSTRIAL BASE

FIGURE 4-1

removed from scrutiny until or unless the programmed corrections were actually executed or until the problem situation changed.

4.5 This report provides a very clear view of the capability of the Air Force to sustain those elements which are deployed.

4.6 The functional categories which have been changed are: CAPSTONE to Reconnaisance and DARCOM to Air Force Logistics Command (AFLC).

Chapter 5. NAVY ADAPTATION

5.1 Figure 5-1 is an adaptation of Figure 2-1 for the US Navy. This adaptation is in the form of a matrix face only. This is a portrayal of the functional areas appropriate to US Navy operations.

5.2 The functional areas have been changed to eliminate "CAPSTONE" to change "Engineer Cbt Svc Spt" to "Engineer Support" and to change "DARCOM" to "Mobilization Logistics Support Forces."

5.3 The warfighting categories have been changed to Surface Warfare, ASW, SEALIFT, AMPHIB, and C3I.

5.4 The operation of this model at the Navy Staff level will serve to illuminate warfighting constraints exactly as did the Army model. For example, if an inability to resupply amphibious forces with Class III occurred, it would become evident under POL Handling during the time period in which the problem occurs. The functional area (POL Handling) 06 on the Navy Staff must decide if corrective action is required, initiate the program changes, and then will be responsible for tracking progress of the corrective action until it has been fully executed or until the problem is otherwise resolved.

5.5 This type of system will force into visibility all of the shortfalls existing in the sustainment of naval forces. It

WARFIGHTING CATEGORIES

SURFACE WAR	ASW	SEALIFT	AMPHIB	C^3I
DEPLOY	**MAN**	**MOVE**	**SHOOT**	**COMMAND & CONTROL**
ACTIVE	TROOP SPT	POL	CONV AMMO	INTELLIGENCE
NAT. GUARD	RATIONS	POL HANDLING	AMMO HANDLING	STRAT COMMO
RESERVE	CLOTHING & EQUIPMENT	ENGINEER SUPPORT	ENGINEER CBT SPT	TACTICAL COMMO
CONUS OUTLOAD	NBC PROTECTION	MAJOR ITEMS	CHEM AMMO	AUTOMATION
STRATEGIC LIFT	MEDICAL SERVICE	RECOVERY & EVACUATION	NUC AMMO	
O/S RECEPTION	PERSONNEL REPLACEMENTS	REPAIR PARTS	MISSILES	INVENTORY CONTROL
INTRA-T LIFT	LOGISTICS TRAINING	MAINTENANCE	AVIATION LOGISTICS	HNS

CONUS BASE

MOB TRAINING BASE	MOBILIZATION LOG SPT FORCES	INDUSTRIAL BASE

Chapter 6. MARINE CORPS ADAPTATION

6.1 Figure 6.1 has been developed as a modification to Figure 2-1. This will allow the Marine Corps to use the model as an input device to the DoD model. This adaptation is in the form of the matrix face only. This is an easy-to-use portrayal of the functional areas appropriate to Marine Corps operations.

6.2 The warfighting categories have been changed, for this adaptation, to Ground Combat (GND CBT), Amphibious (AMPHIB), TACAIR, Air Defense, and C3I.

6.3 The operation of this model at Headquarters, Marine Corps will serve to illuminate warfighting constraints exactly as did the Army model. For example, if a shortage of air-to-air or air-to-ground missiles occurred in a theater it would show up in the appropriate time period when it occurs(the block for missiles would be RED.) The ammunition functional proponent(an 06) must determine what specifically caused the problem and recommend corrective action....forward stationing, redistribution, etc.. Thereafter, this war stopper will be followed until corrected or otherwise resolved.

6.4 If required, corrective programming action should be initiated; this warstopper would not be removed from the base data until the problem situation changed.

WARFIGHTING CATEGORIES

GROUND CBT	AMPHIB	TACAIR	AIR DEFENSE	C^3I
DEPLOY	MAN	MOVE	SHOOT	COMMAND & CONTROL
ACTIVE	TROOP SPT	POL	CONV AMMO	INTELLIGENCE
NAT. GUARD	RATIONS	POL HANDLING	AMMO HANDLING	STRAT COMMO
RESERVE	CLOTHING & EQUIPMENT	ENGINEER CBT SVC SPT	ENGINEER CBT SPT	TACTICAL COMMO
CONUS OUTLOAD	NBC PROTECTION	MAJOR ITEMS	CHEM AMMO	AUTOMATION
STRATEGIC LIFT	MEDICAL SERVICE	RECOVERY & EVACUATION	NUC AMMO	
O/S RECEPTION	PERSONNEL REPLACEMENTS	REPAIR PARTS	MISSILES	INVENTORY CONTROL
INTRA-T LIFT	LOGISTICS TRAINING	MAINTENANCE	AVIATION LOGISTICS	INS

CONUS BASE

MOB TRAINING BASE	MOBILIZATION LOG SPT	INDUSTRIAL BASE

FIGURE 6-1

6.5 The changes which have occurred to the functional areas are: CAPSTONE is eliminated; and, DARCOM to LOG SPT FORCES.

Chapter 7. OFFICE OF THE SECRETARY OF DEFENSE/CHIEFS OF STAFF ADAPTATION

7.1 At the Office of Secretary of Defense/Joint Chiefs of Staff level of management, it is appropriate to develop a matrix which aggregates and summarizes the shortfalls and their impact which are identified in the individual service adaptations of this model. This has been accomplished as shown in Figure 7-1 and as is described below.

7.2 The following functions are used to aggregate the input from each service model: Force Structure, Manpower, Equipment, Training, Command & Control, Intelligence, Deployability, and Sustainability. These blocks are designed to be color coded either GREEN (81-100%), YELLOW (51-80%), or RED (0-50%) depending upon the percentage of the required support which can be furnished in each of the categories as they are looked at in each time period. It is essential that these categories be defined to explain which functional elements are included therein.

Force Structure- This category asks "Do we have sufficient Force Structure available to meet the need in this time period?" For example, if a shortage of hospital units became a warstopper, this shortfall would show up here only if there were an insufficient number of such units in the force. Existing units which are under-manned, under-equipped, or not deployable would not be shown in this category.

DEPARTMENT OF DEFENSE/JOINT CHIEFS OF STAFF ADAPTATION

ARMY	AIR FORCE	NAVY	MARINES
FORCE STRUCTURE	FORCE STRUCTURE	FORCE STRUCTURE	FORCE STRUCTURE
MANPOWER	MANPOWER	MANPOWER	MANPOWER
EQUIPMENT	EQUIPMENT	EQUIPMENT	EQUIPMENT
TRAINING	TRAINING	TRAINING	TRAINING
COMMAND & CONTROL	COMMAND & CONTROL	COMMAND & CONTROL	COMMAND & CONTROL
INTELLIGENCE	INTELLIGENCE	INTELLIGENCE	INTELLIGENCE
DEPLOYABILITY	DEPLOYABILITY	DEPLOYABILITY	DEPLOYABILITY
SUSTAINABILITY	SUSTAINABILITY	SUSTAINABILITY	SUSTAINABILITY

Figure 7.1

Manpower-This category displays manpower shortfall when manpower availability (recruiting and retention) becomes critical. This category will include aggregate under-manning of units. For example, if the Rapid Deployment Force-Army (RDF-A) had a unit scheduled to be deployed in a particular time period but the unit was only at 70% strength, this situation would be reflected under Army with Manpower color coded YELLOW. This block (manpower) would also reflect a loss of manpower as it occurred in a conflict. As a further example, if the RDF-A suffered significant casualties (30%) by D + 40, the slide for the period D + 40 would have the appropriate color code in the manpower block (Green 81-100%, Yellow 51-80%, Red 0 -50%) depending upon the loss which had occurred. In this example, the block would be coded YELLOW (70%).

Equipment-This category displays equipment shortfall when equipment availability (either shortage or not ready) becomes critical. For example, if the Air Force had an in-flight safety problem which grounded all C141 aircraft at D + 4, then the equipment block might be color coded RED if the problem precluded use of the aircraft in the on-going deployment. Or, if the Army had an RDF-A unit which was short 30% of its tanks, the Army equipment block would be YELLOW.

Training-This category displays training base shortfalls as well as significant unit training shortfalls. Normally, this

category will reflect training base problems since it is doubtful that enough forces in any service would be so poorly trained that it would affect the overall service mission. An example which might occur during the D to D + 10 time period is the expansion of the the training base. In this instance, a shortfall in expanding might cause any of the services training block to be coded either RED or YELLOW depending on criticality.

Command & Control-This category displays shortfalls in command and control systems. For example, the lack of a computer data link at D + 40 for Air Force Logistics elements forward deployed might inhibit command and control of logistical systems. The failure/lack of a satellite might cause a critical command communication link shortage for naval forces in a given scenario. These situations would be reflected in this block.

Intelligence-This category displays any shortfall either service or DoD wide which limits the gathering, analysis, or dissemination of strategic/tactical intelligence.

Deployability-This very important category displays shortfall in deployment systems to include intra-theater lift. This category reflects air, land, and sea means of deployment. For example, if the Army has forces required in a theater by D + 20 but the air or sea lift is not available, then this

category would be color coded appropriately. Also, the same block under Air Force or Navy would be colored to show that there was a problem in providing lift. Similarly, an Army shortfall in providing intra-theater lift would cause the Army and the other affected service (Navy or Air Force) Deployability block to be color coded to display the shortfall.

Sustainability-This category displays the shortfall in sustaining deployed forces. The shortfall may exist in any service or any class of supply(Class I through IX). If a force is deployed and cannot be maintained due to the lack of maintenance capability or repair parts, etc., then the sustainability block for the affected service must be color coded appropriately to reflect the shortfall. For example, if the Navy had a problem refueling a deployed fleet at D + 40, then the Navy Sustainability block would be color coded appropriately. If the Army could not resupply repair parts to their forces because of the lack of parts, then the Army Sustainability block would be colored RED. If the Army had the repair parts but the Air Force could not provide the lift required then the Army Sustainability block and the Air Force Deployability blocks would be coded appropriately.

7.3 To insure understanding of how functional category data from each service model is shown after input to the OSD/JCS model, the

service model categories are listed across from the OSD/JCS category which is most likely to be affected by the input.

Service Model Category	OSD/JCS Category
Active, National Guard, and Reserve	Force Structure
	Manpower
	Equipment
	Training
Conus Outload	Force Structure
	Deployability
	Sustainability
Strategic Lift	Force Struct(AF & Navy)
	Deployability
	Sustainability
Overseas Reception	Force Struct(AF & Navy)
	Deployability
Intra Theater Lift	Force Structure
	Deployability
	Sustainability
Troop Support, Rations, Clothing & Equip	Sustainability
NBC Protection	Force Structure
	Sustainability

Medical Service	Force Structure Manpower Equipment Sustainability
Personnel Replacements	Manpower Training Sustainability
Logistics Training	Training Sustainability
POL, POL Handling	Force Structure Deployability Sustainability
Engineer Cbt and Cbt Ser Spt	Force Struct(AF & Navy) Deployability Sustainability
Major Items, Recovery and Evacuation, Repair Parts, Maintenance, Conv Ammo, Ammo Handling, Chem Ammo, Nuc Ammo, Missiles, Aviation Logistics	Force Structure Sustainability
Intelligence, Strategic Commo, Tactical Commo, Automation, and Inventory Control	Intelligence Command and Control Deployability Sustainability

Host Nation Support	Force Structure
	Command and Control
	Deployability
	Sustainability
Mobilization Training Base	Manpower
	Training
	Deployability
	Sustainability
Logistics Command (All services)	Deployability
Industrial Base	Sustainability

7.4 The value of this model at the OSD/JCS level is directly proportional to the timeliness of its use. This model should be completed/updated prior to the publication of the Defense Guidance. It can be used as one input to the formulation of Defense Guidance which will cause the individual services to take some action to resolve the most serious deficiencies.
The second use of this model should occur in the form of an update after the individual services have submitted their POM to OSD. At this point, comparison of the models by time period and comparison of the "Actions Taken to Correct Deficiencies" will allow a rapid analysis of improvements or the lack thereof which will affect critical shortfalls. Thus, we can "grade" the program of each service as to how well or poorly critical deficiencies are resolved through the application of resources.

Chapter 8. Summary

8.1 A look at readiness reporting at the staff level of the various services reveals that each has some methodology for reports from field commanders concerning readiness; however, these reports are certainly not standardized, nor are they in any form useable for measuring sustainability. Further, none of these reports provide an analysis of the capability to warfight in any scenario or what is being done through PPBES to correct deficiencies.

8.2 Procedures in POM building start with total requirements and, based on the previous year's POM begin to build the current POM. The allowed time in which this can be accomplished is so short that too often, the challenge is just one of getting the POM put together but it does not always address the question of whether or not the most critical deficiencies are being identified.....let alone resolved.

8.3 At the OSD and JCS levels, we see a reiteration of the process on the larger level and a move toward more analysts to take a more critical look at specific programs. There simply is no baseline of information available currently at OSD or JCS which will illuminate deficiencies and the corrective measures required or being taken.

8.4 The model proposed in Chapters 1 through 6 is designed

to accomplish four objectives: Provide a standardized methodology of evaluating sustainability for deployed forces from the area of deployment rearward to include the Industrial Base; provide a simple standardized methodology for presenting the most critical deficiencies and warstoppers to each service leadership; provide a methodology for aggregating this sustainability data pre- and post- POM preparation to allow comparison of results; and provide a methodology for presentation of the same sustainability data to the OSD/JCS leadership in an aggregate form.

8.5 In order to demonstrate the manner of display of this model, I will use a purely hypothetical situation. We will assume that the scenario is one of potentially global conflict. Specifically, the United States deployed the Rapid Deployment Forces (RDF) to a Middle East Asia Theater. The NATO scenario followed thirty days thereafter. These examples (AGAIN THEORETICAL) are occurring at NATO D Day + 10 as shown on the slides.

8.6 Each service and the OSD has a slide, the time period is as identified in the upper right corner of the slide. As backup/ explanation, there is a second slide explaining what the problems are as well as what is being done to correct the deficiencies:

Army Situation — Figures 8.1 and 8.2

Air Force Situation — Figures 8.3 and 8.4

Navy Situation	Figures 8.5 and 8.6
Marine Corp Situation	Figures 8.7 and 8.8
OSD Situation	Figures 8.9 and 8.10

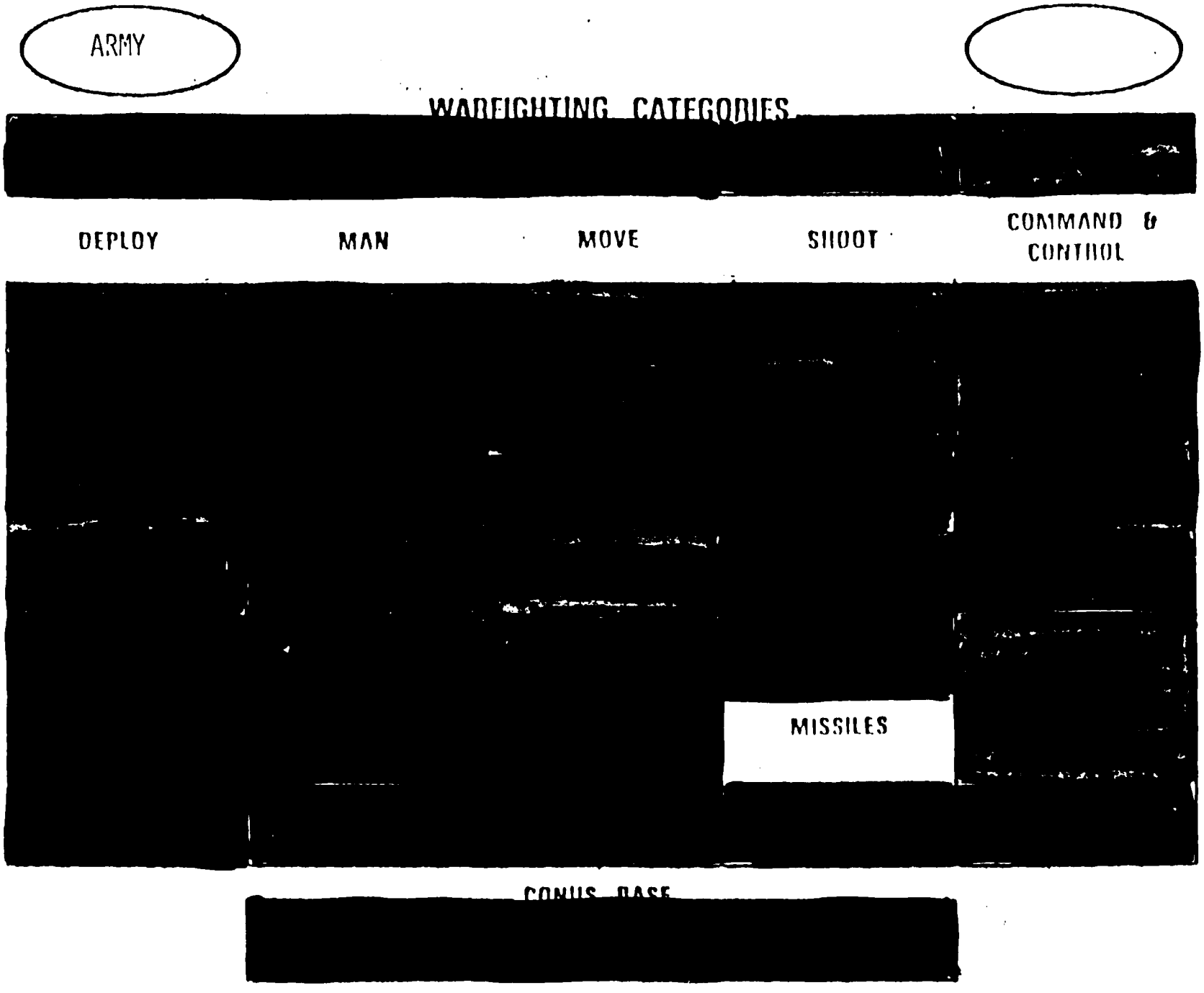

ARMY
WARFIGHTING CATEGORIES
DEPLOY
MAN
MOVE
SHOOT
COMMAND & CONTROL
MISSILES
CONUS BASE

FIGURE 8.1

ARMY BASE DATA

WHAT MUST BE FIXED:

-Lift not available in adequate time (sea, air, intra-t)

-Medical Service inadequate to meet evacuation standard

-POL and Ammo Handling may be warstopping deficiency

-DARCOM requires personnel increase

-Mobilization and Industrial Bases are inadequate for requirement.

WHAT CAN BE DONE-TOMORROW:

-Innovative lift alternatives

-Hire/draft medical service personnel

WHAT IS BEING DONE:

-Support AF and Navy lift initiatives

-Medical service get well FY 86

-POL and Ammo Handling systems begin coming in FY 87

-Industrial preparedness plus-up funded.

WHAT REMAINS TO BE FIXED:

-More funds to preparedness of the industrial base

-Additional funding for Air/Sea Lift required

Figure 8.2

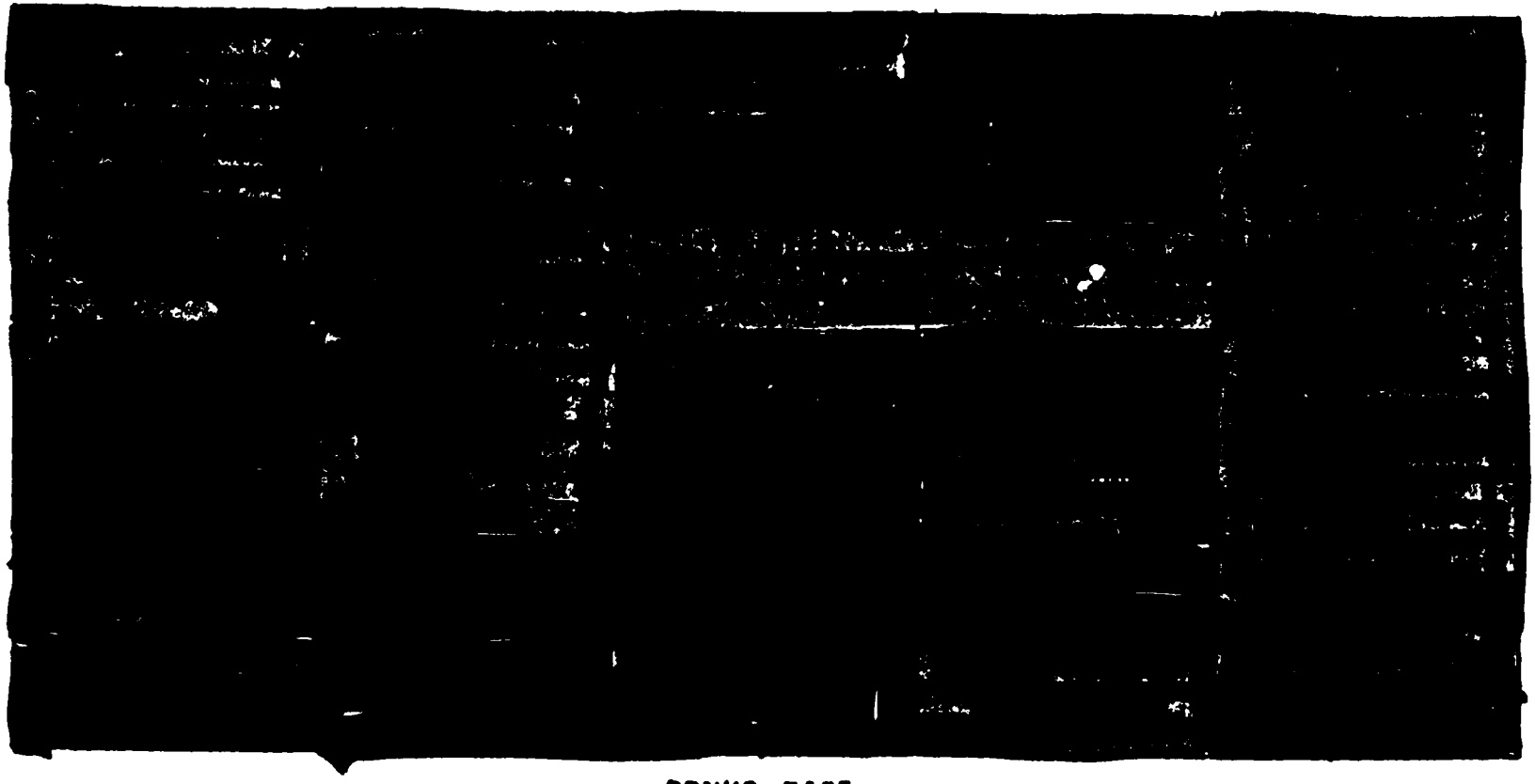
AIRFORCE

D + 10

WARFIGHTING CATEGORIES

[redacted]

DEPLOY | MAN | MOVE | SHOOT | COMMAND & CONTROL



CONUS BASE

[redacted]

AIR FORCE BASE DATA

WHAT MUST BE FIXED:

-Airlift shortfall. Lack of capability to redeploy airlift assets.

-Training base requires expansion earlier

-Industrial Base investment required to reduce lead times

-Ammo and POL Handling capability dependent on Intra-t lift and sea lift

-Major shortfall in air-to-air missiles

WHAT CAN BE DONE-TOMORROW:

-Explore emergency lift sea/air. Extend CRAF.

-Expand missile production(if is line in operation)

WHAT IS BEING DONE:

-C17 Program. C141 Stretch program in process.

-Expand training base in peacetime FY85

-Industrial Preparedness funded FY 83-88

-Missile procurement funded FY84

WHAT REMAINS TO BE FIXED:

-Ammo/POL Handling upgrade

-Increased investment in Industrial Preparedness

Figure 8.4

NAVY

WARFIGHTING CATEGORIES

[redacted]

DEPLOY | MAN | MOVE | SHOOT | COMMAND & CONTROL

[redacted]

INTRA-T LIFT

CONUS BASE

[redacted]

NAVY BASE DATA

WHAT MUST BE FIXED:

-Strategic sealift must be improved

-Medical support reduces drastically with marine support requirement

-Major shortfall in ships

-Comventional ammunition shortfall (missiles)

WHAT CAN BE DONE-TOMORROW:

-Draft medical service personnel

-Try to expand all existing production lines

WHAT IS BEING DONE:

-Sealift assets being programmed FY 86

-Improved medical force structure and equipment FY 86-89

-Warships programmed FY 84-89

-Missile production funded FY 83-87

WHAT REMAINS TO BE DONE:

-Sealift avialable assets must be organized and rapid assembly system executed

-Warship expansion program must be supported

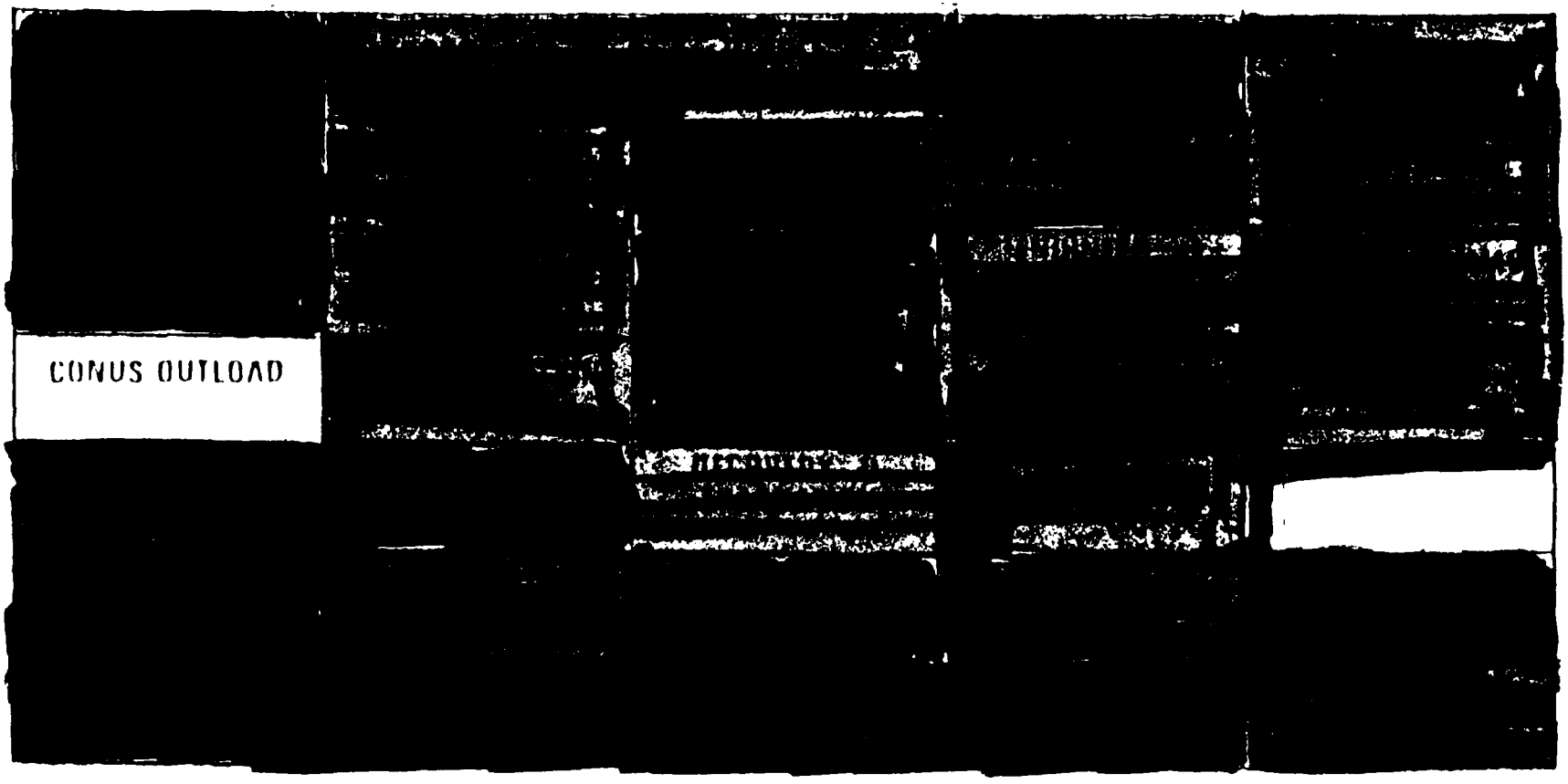
Figure 8.6

MARINES

WARFIGHTING CATEGORIES

[redacted]

DEPLOY | MAN | MOVE | SHOOT | COMMAND & CONTROL



CONUS BASE

[redacted]

MARINE CORPS BASE DATA

WHAT MUST BE FIXED:

-Personnel replacements must be expedited

-POL and Ammo Handling must be upgraded and expedited

-Critical shortage of missiles must be resolved

-HNS has not been responsive

-Industrial Base unable to react to increased demands

-Medical Support degraded with onset of NATO operations

WHAT IS BEING DONE:

-Recruiting efforts doubled

-Training Base expanded. Shortened training cycles

-POL and Ammo Handling initiatives by Army supported

-Missile procurement expedited (unsuccessfully) FY 86 earliest expected deliveries

WHAT REMAINS TO BE DONE:

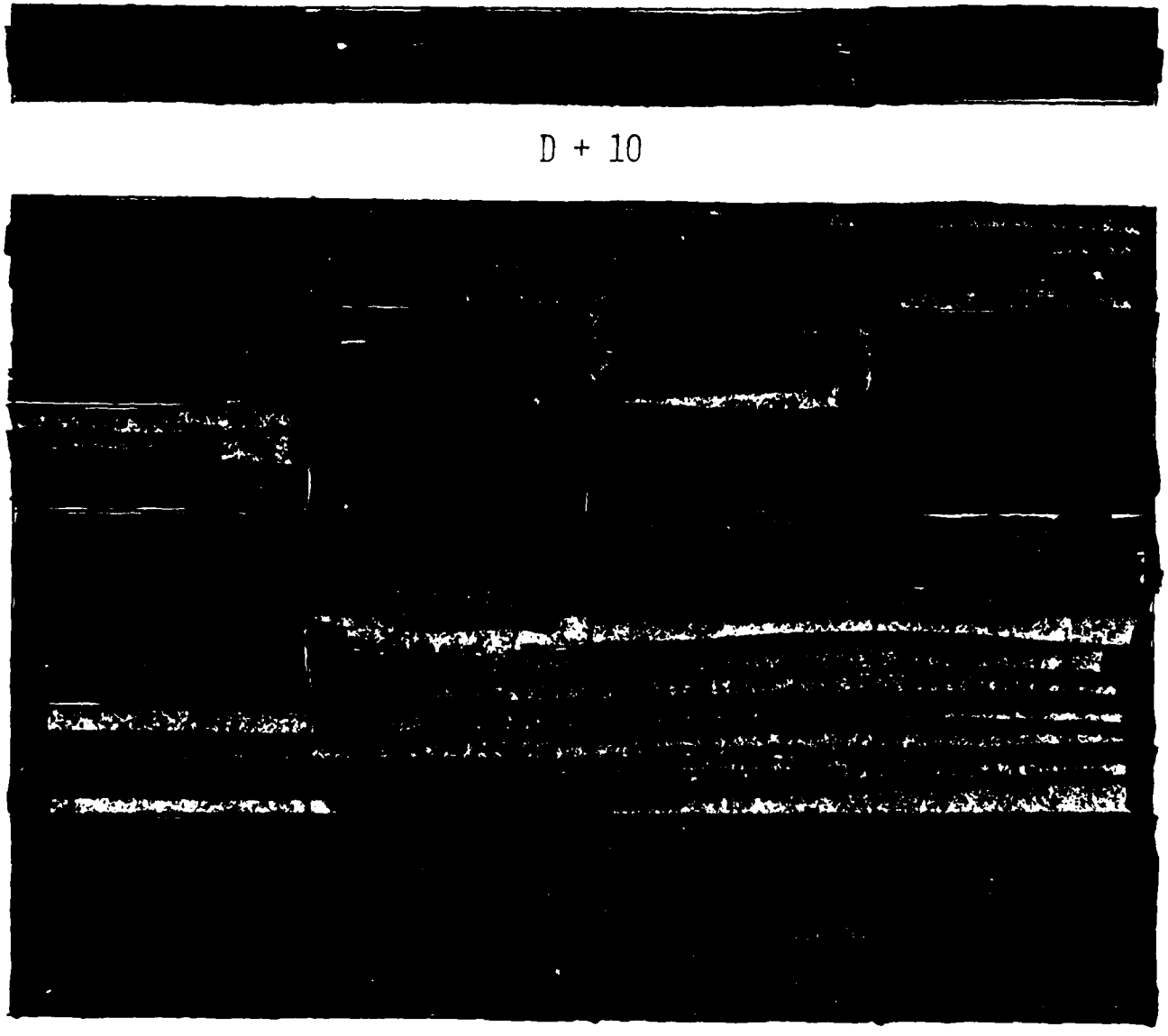
-Energize Host Nation Support across the board

-Medical Support must be increased....not drained off to NATO

-Industrial Base preparedness totally inadequate...may require more $$$ or additional sources

Figure 8.8

SECRETARY OF DEFENSE/JOINT CHIEFS OF STAFF ADAPTATION



D + 10

FIGURE 8.9

OSD/JCS BASE DATA

WHAT MUST BE FIXED:

- -Army replacements/medical returns inadequate
- -Deployability of OSD elements greatly delayed by lack of air/sea lift assets
- -Sustainability of Army, AF, and Marines greatly reduced by lack of/inability to deliver POL and Ammo
- -Capital ships and marine equipment critically short

WHAT IS BEING DONE:

- -Expansion of training base must be supported
- -Medical support (equipment sets) must be forward stationed
- -POL/Ammo handling systems must remain a major issue in each POM
- -Support Navy and Marine Corps on expansion of capital investment in equipment so reserve equipment will be available

WHAT REMAINS TO BE DONE:

- -Support at the congressional level for service budget items (Sea/Airlift, equipment shortages)

Figure 3.10

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☆ U.S. GOVERNMENT PRINTING OFFICE : 1983 O - 425-560 (48)

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