INTRODUCTION TO MATERIEL MANAGEMENT

9 December 1957

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INTRODUCTION TO MATERIEL MANAGEMENT

9 December 1957

CAPTAIN JUNGHANS: General Mundy, Admiral Clark, Gentlemen: At this time we start Unit V of the curriculum, entitled "Materiel Management."

The Materiel Management Branch is concerned primarily with the provision of materiel and equipment necessary to defense, essential civilian needs, and foreign military assistance, including the associated research and development.

Earlier in the course our branch presented the Requirements Unit. You will recall that Requirements was a study of the determination of national policies and objectives, and of the planning, programing, and budgeting processes to support such policies and objectives.

Presumably, when we had finished the Requirements Unit we had persuaded the Congress to appropriate substantial sums of money for the purposes of meeting the requirements of materials and equipment for the needs of the Armed Forces. Three functions remain to be accomplished in putting into the hands of the Armed Forces these materials and equipment, namely, procurement, production, and distribution. A study of these three functions constitutes the major aspect of the current unit of instruction.

To introduce the Materiel Management Unit, three of my colleagues from the Branch will explain to you why we study these three functions, what their principal elements are, and what we consider to be the major problems which merit your attention.

I am happy to introduce Mr. Fred Muncy, who will discuss procurement.

MR. C. F. MUNCY: Thank you, Captain Junghans.

My subject this morning is Procurement.

Military procurement officers are without doubt the unsung heroes of the battle for national security. They are the men who sign their names to contracts for Uncle Sam, to insure that the hardware and the logistic

support for our military efforts will be available when needed. In this phase of the Materiel Management Unit you will examine and appraise the procurement policies, the concepts, and the problems which make up this interesting, shall I say, "can of worms." I say "interesting" because it involves about $18 billion, more than all the money spent by the 10 top corporations of the country. It is most complex because it supports our part in an extraordinary technological race with a skilled, tough opponent; most significant because our Nation's existence depends on it.

Now, this is what I propose to do in the time available this morning: First, I am going to state the objectives of the procurement phase of this unit; second, to discuss some of the basic policies which govern military procurement; and third, indicate what you may expect to derive from the unit.

At this point one definition is important. Military procurement includes not only the purchase of materials and supplies, but it includes also other important related functions, such as planning procurement programs; selection of contractors; placement, administration, and termination of contracts; and aid to contractors. Finally, it includes general coordination to insure efficiency of operation.

Efficient procurement takes on increased importance in this period of rapidly rising costs, budget limitations, and debt ceilings. The heat is literally on procurement officers as we move into the missile era of this postsputnik world.

And now for the objectives of our study:

1. We will study procurement policies and concepts which currently determine how military appropriations are used to maintain and improve our national security.

2. We will scrutinize policies carefully in the light of today's security requirements--and I will add--without getting lost in the details of regulations.

3. We will give you opportunities to react to the problems, with the thought that you, the Class of 1958, will perhaps come up with new ideas to improve military contracting.

Turning now to the basic policies, time will permit me to mention only six this morning. These are paraphrased, of course, but I am trying to bring out the important points to you.

The first is that contracts must be awarded to the lowest responsible bidder, selected after advertising for sealed competitive bids. There are exceptions to this policy which I will mention later.

This policy was adopted in 1860 as Section 3709 of the Revised Statutes. It was revised in World War II; and when the Armed Services Procurement Act of 1947 was enacted, it was incorporated permanently into that act.

Now, currently, the Congress wishes to further restrict the authority of the military departments to negotiate contracts. They have so reported many times. This volume which I hold in my hand is their most recent report, dated 15 June 1957, "A Study of the Armed Services Procurement Act." This represents, it seems to me, the background from which the Congress no doubt in this next session will take up the problem of whether the Armed Services Procurement Act should be amended. You will have an opportunity during this course to decide, after considering the facts, whether in your judgment amendment is in order.

Now, the second policy is that during national emergencies declared by the President or the Congress, contracts may be negotiated under any of 17 exceptions stated in the law. Here a few background facts will be in order.

The President declared a state of national emergency in December, 1950, and that emergency has not been lifted. During the seven years which have elapsed, the military departments have negotiated the great bulk of procurement contracts, as is shown in this chart.

Chart 1, page 4.--I think the facts are pretty clear there. As between the services you will note there is some variation, but certainly the great bulk in all cases has been negotiated. As we look back to 1951, we see the trend has been rather consistent, and it continues to date. The most recent complete figures are for the fiscal year 1956.

Now, there are many compelling reasons why the military departments have negotiated such a large proportion of their contracts. I am not going into those matters. We will have time to discuss them during the unit, however. The Department of Defense says that there is ample justification for negotiating such a large proportion, and they cite many examples. It is true, however, that the Congress has not been convinced thus far, and I anticipate that this coming Congress undoubtedly will consider this among the many other problems.

CHART 1

PERCENTAGE OF ALL MILITARY CONTRACTS BY DEPARTMENT
FOR FISCAL YEAR 1956
(NET VALUE)
%

	ARMY	NAVY	AIR FORCE
ADVERTISED	28.7	15.1	3.7
NEGOTIATED	71.3	84.9	96.3

PERCENTAGE OF ALL MILITARY CONTRACTS
DEPARTMENT OF DEFENSE
(NET VALUE)
%

	1951	1952	1953	1954	1955	1956	AVERAGE
ADVERTISED	12.1	10.8	11.1	15.6	16.0	15.9	12.7
NEGOTIATED	87.9	89.2	88.9	84.4	84.0	84.1	87.3

SOURCE:
OFFICE OF ASSISTANT SECRETARY OF DEFENSE (S&L)
9 OCT 1956

The third policy is this: When ordered by the Secretary of Defense, assignments of coordinated procurement responsibility are made to a single manager.

To date, eight single manager assignments have been made. They are subsistence, to the Army; medical and dental, to the Navy; photographic materials, to the Air Force; clothing and textiles, to the Army; petroleum, to the Navy; military sea transport, to the Navy; military air transport, to the Air Force; and military traffice management, to the Army. In a recent news release Secretary McElroy announced that he proposes to set up a single manager for the development of future missile and satellite projects.

Many questions arise in this area. One comes to mind immediately and you will have an opportunity to discuss this matter during the unit. These assignments were all made during the period of cold war. Will they work equally well during hot war?

Now, the fourth policy is that a fair share of military procurement shall be awarded to small business. This policy was written into the Procurement Act of 1947, and the President emphasized its importance in a letter to the Secretary of Defense at that time. Since then the Small Business Administration has been established by Congress to help small business get a "fair share" of defense business.

Many questions arise. What is a fair share? How does the Department of Defense subcontracting policy apply to small business? Do you give special consideration to a small business located in an economically depressed area? Many other important questions will be raised during this study, and you will have the opportunity to have the facts. You can make up your own minds regarding the problems.

The fifth policy is: Profits are necessary as incentives in a free economy, but excessive profits are to be renegotiated.

The Renegotiation Board, established by law in 1951, is an independent agency responsible for determining and recovering for the Government excessive profits from defense contractors. As you can imagine, questions are hot and heavy in this area. Among them are such questions as these: Is renegotiation necessary during cold war? Many volumes of testimony have been written on the part of business indicating that it is not necessary. The facts are, however, that Congress has renewed this act several times in recent years. What effect does renegotiation have on

military pricing policies? The National Security Industrial Association has raised this question and discussed it at some length in its booklet, published in September of 1957, entitled, "Recognition of the Risks of Government Contracting." Copies of these bulletins will be available in your room sets. Does statutory renegotiation adequately recognize the risks industry is subjected to in accepting defense contracts? These and many other questions will be considered when you go into that policy.

The final and last one which I will have time this morning to discuss is this: Procurement contracts shall provide for their prompt and equitable termination for the convenience of the Government.

In wartime, changes in strategic plans result in cutbacks, stoppages of procurement programs, and design changes. Such changes are inevitable, and orderly termination is a necessity.

A recent example is the cancellation of the Navaho Missile Project, with its accompanying problems. Are there better ways to handle such changes? What are the facts?

Now, this list of procurement policies which I have mentioned is obviously incomplete; but it does serve to indicate the nature of these policies and the problem areas concerned.

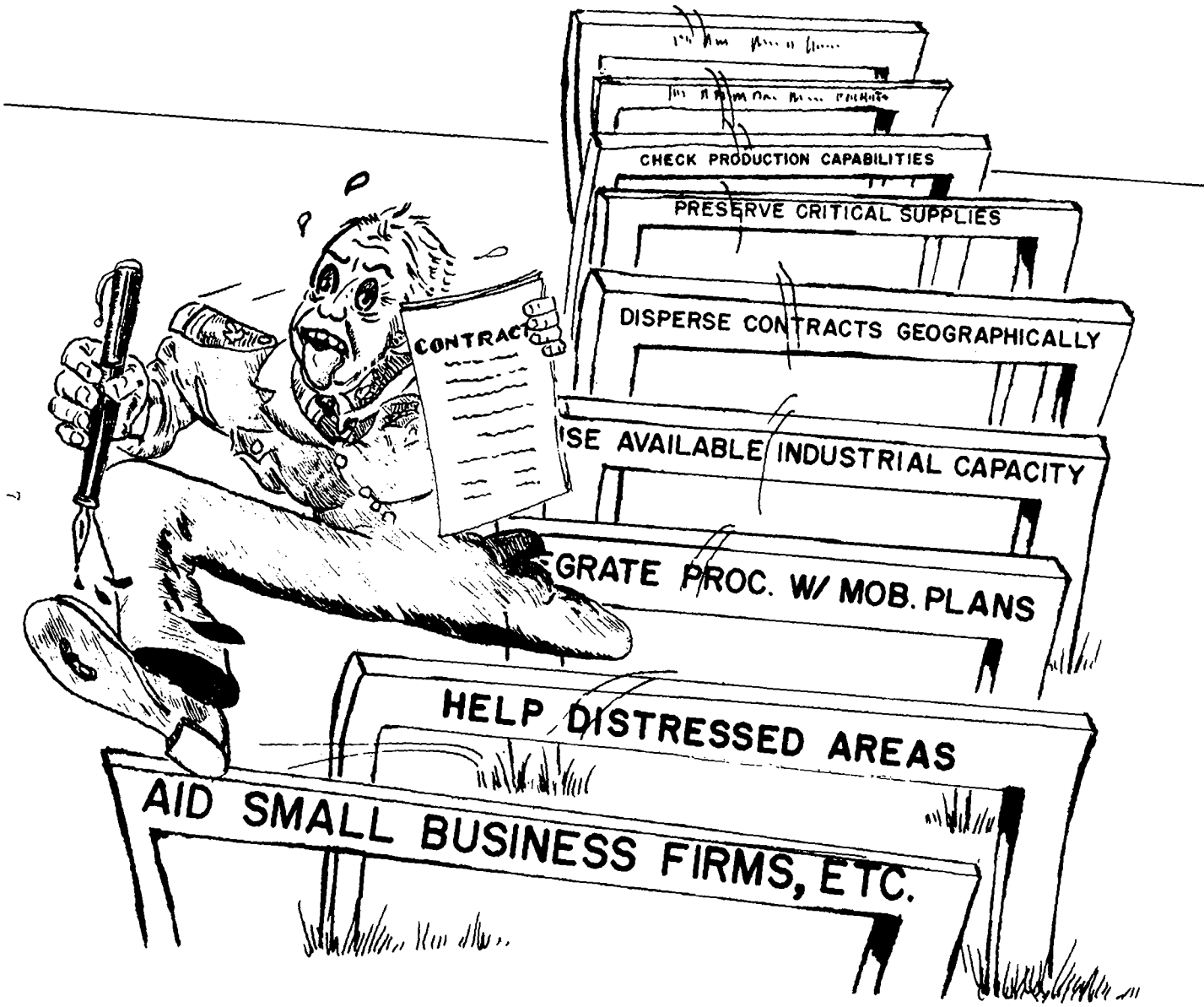
In summary, what should you derive from this brief study of procurement? As senior military and civil officers, your advice and decisions in future command, staff, and planning assignments will bear directly or indirectly upon the performance of procurement functions. Your study at this College should materially improve your knowledge of the background of these policies and give you a broader base for such advice and decisions.

Now, to the extent that you succeed in this, you will help to remove, or lower at least, some of the hurdles shown in this chart.

Chart 2, page 7.--I might say that Earl Chesney is the author of this cartoon. He drew it when he was in procurement work with the Navy Department. His caption on the original read: "You'll have to eliminate some hurdles, Uncle, if you expect timely performance."

Perhaps that's a good thought to conclude my remarks with, because it is surely true that we do need to eliminate some hurdles in the procurement area if we are to insure timely performance. Thank you.

CHART 2


CHECK PRODUCTION CAPABILITIES
PRESERVE CRITICAL SUPPLIES
DISPERSE CONTRACTS GEOGRAPHICALLY
ISE AVAILABLE INDUSTRIAL CAPACITY
GRATE PROC. W/ MOB. PLANS
HELP DISTRESSED AREAS
AID SMALL BUSINESS FIRMS, ETC.
CONTRACT

It is now my privilege to introduce our friend, Captain Archie Wright, who will speak on the production phase.

CAPTAIN WRIGHT: Thank you, Fred.

Before launching into most discussions, I believe it is customary to give at least one definition, so that the speaker and the audience start from a common point of departure. I have here a definition of production, in a lighter vein, which was no doubt dreamed up by someone who had served a tour of duty in Washington during a period of mobilization. But here it is:

"How to build the stuff we have no requirements for, in quantities we can't determine, in time to dispose of it as surplus, just before we find out we need it."

Although in the past the Navy has suffered from a surplus of oyster forks, and if you believe what the newspapers had to say, we had hamburgers coming out of our ears at one time, I would like to disclaim any credit for my service having developed this particular definition of production. But it does point up, in a negative sort of a way, how the study of production fits into the Materiel Management Unit and into the 10 months' course that you are pursuing here at the College.

We in the United States are blessed with a marvelously productive industrial system. With about 6 percent of the total population of the world, we produce almost 40 percent of the world's manufactured goods. We do this through the application of sound engineering and management techniques, through a system of highly integrated industrial complexes, through the substitution of mechanical for human energy, and through the automation of routine and repetitive industrial chores. This industrial system of ours is the source and the backbone of our Nation's material strength.

In your study of production in selected industries, we hope that you will gain an insight into the production processes within the particular industry that you have under study, and the interrelation and interdependence of this particular production to production within the whole of our economy.

Now, some of you will be studying industries, such as the iron and steel industry, in which the basic raw materials are converted into semi-finished materials and passed on to other industries for finishing into the

end products. Others will be studying industries, such as the machine tool, that are basic to production throughout our economy, but whose product is largely tailored to the individual customer's demand. Still others will be investigating the high-volume, assembly-line industries, such as the automotive, that produce for the mass market.

In all of these industries you will find that the underlying principles are the same. The production process is simply varied to suit the end product and the market served. Such factors as plant location and layout, company organization, production programing and scheduling, product and production engineering, materials handling, and quality control will be common to all of them.

In the study of your specific industries you will have the opportunity to explore the production process in depth. This is basically the case method of studying any subject. The breadth of the study will come, we hope, through the lecture program.

I would hasten to add that we do not expect to make production engineers or shop foremen out of any of you. But we do hope that you will emerge from this unit with a greater appreciation of the many factors involved in the process of producing the necessary goods and services for our national well-being, and the close relationship that must exist between our industrial leaders and our military leaders in order that our industrial might can be transformed into military might.

I would like to answer very briefly for you three questions. First, Why do we study production? Second, What are the principal elements of the study that will require your research and attention? Third, What are some of the major problem areas in defense production?

For an answer to the first question, I would like to quote to you from Dr. Louis Hunter's opening lecture when he was describing the course at the College. He said:

> "It's economics combined with politics and administration, with geography and psychology and a number of other things as well. But the core of the course is production--production within the framework of the national economy; and that, of course, is economics."

It is this ability of our people to produce the necessary goods and services that has set our Nation ahead of the rest of the world. Many factors enter into making up this capability of ours--geography, religion, resources,

native intelligence, education, political beliefs, et al. But the fact remains that it exists; and we feel that it is important to know something of the process of the growth of representative industries, how they produce currently, and the trend in our production processes for the future.

The end purpose of the study is to gain an appreciation of the capabilities and limitations of our industries in support of our national objectives, with particular attention to their ability to provide for the needs of our military services in time of war.

The second question: What are the principal elements of the study of production that require your research and attention?

Well, first, I would say a thorough grounding in the fundamentals of the production process is required. We have tried to brief these for you in Volume XIII of "Emergency Management of the National Economy" (blue book), and in certain other of your suggested reading. Our thought here is that one must learn to walk before he can learn to run. In order to gain the broader appreciation and understanding of the role that defense production plays in our national security, you must first begin with an appreciation at least of the fundamentals of the production process.

Second, we would like to get across to you the basic laws and Executive orders that govern defense production activities, and the governmental organization that has been set up to deal with this problem. Again, this has been briefed for you in the monograph R-208, "Governmental Organization for National Readiness Production Planning," and certain other suggested reading. You have already come into contact with most of these agencies in your studies thus far. You will encounter them throughout the remainder of your course here. During the production study we wish to highlight their functions in defense production.

The National Security Act of 1947, with its amendments and implementing Executive orders, defines the organization for defense production. The Defense Production Act of 1950, with its amendments defines the authority and the areas in which this organization currently functions. Of vital importance to defense production activities has been the Defense Materials System, called the DMS for short, which provides for the control of critical materials to defense producers and their subcontractors. All of these basic laws and regulations will require your attention during your study of production.

Now, here are some of the techniques that are currently in use to help create and maintain a state of readiness for production in an emergency:

The current producer, which is the hot line concept.
The dual-purpose plant, which is the guns and/or butter concept.
Standby facilities.
Standby tools.
Tool stockpiles.
Preparedness contracts with industry.--This is very interesting and productive field.
The Production Allocation Program, which is currently in the process of reevaluation.
Stockpiles of strategic materials.

We hope that during your study of production you will gain an appreciation of the strengths and the weaknesses of these various techniques and why and how they are changing with each new development in weaponry.

Now for the third question: What are some of the major problems or weaknesses in the defense production area? Because of my time limitation, I shall list only four of these, simply posing the problem. If some of you can find better solutions than those currently in the minds of our leaders, our Nation will be eternally in your debt.

First, How do we assure continuity of production under conditions of all-out nuclear assault?

Since President Truman announced in September 1949 that the Soviets had exploded a nuclear device, our war production planning has been in a state of constant flux. The latest concept devised to cope with this threat of major damage to our industrial base was issued by the Office of Defense Mobilization in March of this year (1957). This was Defense Mobilization Order VII-7 (revised), which directs the development of a list of "critical" and "survival" military items or components which must be continued in production even under the most severe conditions of attack and damage to our industrial base. Production facilities for these items will be maintained from current procurement and budgeted funds, at whatever cost to the remainder of the facilities in the production base. You will recall that under the Production Allocation Program a list of some 700-odd items was included. Presumably, this list of "critical" and "survival" items will be much smaller and much more selective.

The second problem: What of the rapid obsolescence of facilities in the production base?

The explosive growth of science and technology has precluded static plans and weapons. Our scientists have told us that a scientific

breakthrough in any of a dozen or more areas could give an aggressor an overwhelming advantage if he has the industrial capability to exploit it. I think it is important to keep that in mind. Science alone cannot confer this advantage. It must be accompanied by a production capability based on a strong industrial base. But 1960 models cannot be produced with 1945 production equipment.

In your study of production I believe you will find that the problem of how we can best nourish and protect this production capability from obsolescence in this nuclear age is a major problem area.

The third problem: What are the effects on production of the growing complexity of our modern weapons and weapon systems? This seems to me to overshadow all other factors at this point in time when we consider our defense production problems.

Complex products inevitably breed complex production systems. Our plants, our equipments, our tools, and our processes become more intricate and require more precise integration and control.

Some examples: Our forging presses now tower several stories high. We work titanium hot in precisely controlled furnaces. Our instruments are assembled in air-conditioned, temperature-controlled, and humidity-controlled factories.

The gyroscopic guidance system in some of our missiles now in production contains ball bearings finished to degrees of roundness that are beyond the measuring capacity of any known measuring device. The only way in which the manufacturer can be assured that he has attained this precision is to assemble and test each unit. If it works, he did; if it doesn't, he tries again.

Now, all of this means more time to get production facilities ready, more money for the production base, more highly trained workers in industry and in the Armed Forces, and more complex management control and decision processes.

Well, now, for the fourth and last problem: How can we reduce lead time in production?

The time-space factor, which in the past has permitted us to mobilize our industry after the outbreak of hostilities, is currently lost to us in the present state of the art of war under certain conditions of attack.

This fact has resulted in a depreciation in the value of our latent industrial potential. Wholesale conversion of civilian industry to war production, as we have known it in the past, does not now appear feasible. Long-lead-time items cannot be produced in time to have an effect on foreseeable conflicts. If stocked, they become obsolete before use.

Nevertheless, we seem to be in a continuous state of shock from the mounting evidence of how the Russians have reduced their lead time. This is indeed a defense production problem area that I think you will find challenges your most imaginative thoughts.

To summarize: We study production because of its importance to our national security and our democratic way of life.

The principal elements of the study are an understanding of the fundamentals of the production process, a general familiarity with the laws and regulations governing the governmental organization for production planning, and the techniques used by this organization for production planning control.

Lastly, some of the problem areas have been pointed out.

We are confident that you will discover many more such problem areas as you deliberate and discuss production within our national economy. We are not without hope that your deliberations may well lead to better approaches toward the solutions to some of these problems.

Your next speaker is Mr. Lowell Henkel, who will discuss for you distribution.

MR. HENKEL: My purpose this morning is to give you a brief coverage of distribution. I will raise and answer four questions. First, what do we mean by distribution? Second, why do we study this subject? Third, what are the major problems? Fourth, what is being done about them?

It is unfortunate that the military supply system, like Topsy, "growed" during World War II, and even now we are reaping the bad results. Some of you may recall how thousands of freight cars were jammed up around the Port of New York in 1942 due to lack of bottoms, and it wasn't until the Victory Ship Program got into full production that this situation cleared up. It not only upset the troops getting supplies, but also industry. I was with industry at that time with a blast furnace and coke plant, and our company had to stockpile both pig iron and coke due to the shortage of cars.

This resulted in the unnecessary use of manpower and caused a lower yield of product due to breakage in handling. Thus you have an example of one of the many problems that are present in distribution.

Now, as to my first question: What do we mean by distribution? Technically speaking, it is that phase of logistics which embraces the act of dispensing materiel, facilities, and services, and includes all the processes involved between the manufacturer and the consumer, that is, the soldier, the sailor, or the airman.

Basically it is a supply management system and covers the organization, administration, and performance of the processes that are necessary to make it function properly. It is the last link in the chain of activities that extends from the requirements, procurement, and production cycle.

Now, as to my second question: Why do we study the subject? We hope to give you an appreciation of the problems associated with the distribution of materiel and to provide you with an understanding of the organization and methods employed in the management of the logistic support of the Armed Forces.

A good distribution system must be responsive to the needs of the troops or ultimate user, flexible in changes from peace to war, as well as changes in strategic plans, and must be economical in its operation. Lack of economy means wasted materiel as well as wasted transportation, or shall we say some combat force is unnecessarily being deprived of adequate means to accomplish its mission.

In a well-organized supply system, consideration must be given to its organization and administrative processes. With a system where the value of the goods runs into the billions of dollars, this becomes a tremendous management job. Actually the military has inventories of approximately $111 billion in planes, missiles, ships, tanks, and other equipment, and an additional $23 billion in airfields, shipyards, depots, and other installations. New assets are being acquired at the rate of about $18 billion yearly, of which $14 billion go into hard goods, $2 billion into soft goods, and $2 billion into construction. Thus you can visualize the tremendous management responsibility that rests upon the shoulders of the supply managers.

To go into detail as to what management processes are involved will take much too long a time, but I will list what I consider the four major elements. First, organization; second, control measures; third, financial management; and fourth, personnel.

Now, as to organization: We must have a good system; and in analyzing the military services you will find that each service has a different type of organization.

Recently a great deal of thinking has been done about the proper level of responsibility at which a commodity organization should become functional, or vice versa. This is a question that has to be decided sooner or later in order to make a success of logistical support. Right now the Army Ordnance has four parallel supply systems: one for general supplies, one for ammunition, one for missiles, and one for nuclear weapons.

Industry's top management recognizes that the structure of an organization helps to determine its efficiency. History shows that most large corporations began with a functional organization; but, as each firm grew in personnel and production, the span of control required decentralization on a product or commodity basis. Recently Harvard's Graduate School of Business Administration recommended that a commodity type of organization be adopted by our Air Force. I believe you will agree with me that it is essential that a commander at any level be able to acquire control in an expeditious and efficient manner of the resources he needs and that he be able to depend on one single agent to accomplish all necessary functions pertaining to any item, such as a gun, a missile, or other piece of equipment.

As to the organization of the services, the National Security Act of 1947 established the mission of the three military departments. It was later supplemented by the Reorganization Plan No. 6 in 1953. While the functions are more or less analogous, the staff operation is quite different in the three departments.

The Army Supply Control System is directed by General Staff action and stems from the Deputy Chief of Staff for Logistics, who controls and coordinates all supply distribution and issue activities through the chiefs of technical services. Responsibility is delegated to area commanders, with appropriate supervision and control.

The Navy system is characterized by a division of logistics. It gives responsibility for prescribing material requirements for operating forces to the Chief of Naval Operations and his assistants, while the business or operating activities are directed by the Chief of Naval Material and the Bureaus, which provide, manage, and support all ships, aircraft, land facilities, ordnance bases, and personnel. Top-level collaboration determines the working stock levels and replenishment needs, and directs

inventory control systems. Specialists in the Bureau of Supplies and Accounts handle most of the operating procedures covering receipt, storage preservation, and shipping.

The Air Force system originates at the top level with the Deputy Chief of Staff, Materiel, charged with staff supervision. He is aided by five directors. The Air Materiel Command is in operational control of supplies down to the air base level. The tactical commander maintains control over his own materiel, but furnishes prescribed information to AMC for the rate of issue and status of materiel.

My second element, control measures: These are the means required to make the distribution system function properly. On any one of these one could lecture an hour or more and still not cover it adequately. Later on I plan to dicuss a few of them.

You will find an excellent description of these in your Supply Management Monograph, which is in your room set.

Now, as to financial management: You heard the talk by Mr. Rappaport on certain aspects of financial controls, but probably the biggest improvement in this phase is that of extending the stock and industrial fund principles.

A military supply manager has an immense responsibility in this area. He must fulfill the responsible task of substituting for business incentives the urgency of national interest and keep in mind what is most economical for his operations.

Now, as to personnel: Both military and civilians are an essential part of this organization, and each service calls for both skilled and semi-skilled training. Prior to World War II approximately a third of the military organization was involved in the supplying of troops. With the development of new weapons and electronic data-processing machines, the number of personnel has increased at least 10 percent, if not more. And at the same time it requires more skilled operators.

Now, what are the principal problems and what is being done about them?

There are many, Some are inherent, some are due to lack of foresight, some are due to legislative action; but in making an analysis you will find that there has been an element of complacency throughout the

services. While some definitive action has been taking place, it was not until Congress brought pressure to bear that any real corrective measures have been applied.

Some of you may take exception to this statement, but I think history will bear me out. Here's a pamphlet just put out (July) by the Assistant Secretary of Defense (Supply and Logistics). Its title is "Key Objectives, 1957, and Project Developments to Accomplish Objectives." It's the recent thinking of the Department of Defense. It covers precurement, production, and distribution, of which about half is devoted to aspects of distribution. This will be placed in your room set today.

Now, in attempting to select major problems, that is somewhat difficult for the reason that all areas are more or less equal in importance and necessary. However, since 1948, emphasis has been given to achieving a more efficient, economical, and practical supply system in which certain measures, such as inventory control, cataloging, standardization, cross- and inter-servicing, and the single manager plan are being stressed.

Undoubtedly the heart and brain of a military distribution system are inventory control--the brain because it predicts future needs for material and where it will be needed, the heart because it controls the flow of material throughout the supply system.

An efficient inventory control system depends on several features, most important of which are a good cataloging system, proper means of identification, and good statistical data. The use of electronic processing machines has improved this operation.

Supply levels are another factor affecting supply distribution. This problem of levels of supply is of constant concern to the military services. The rate of consumption and the critical nature of an item have a definite bearing on levels, as does the proximity or remoteness of location to sources of supply. There is the determination of what the correct level of supply should be. Also adequate reserves are necessary, but what is "adequate"? Storage and issue are additional technical elements of a distribution system, but they are influenced by a statement of requirements. Then there is the inherent problem of stocking and warehousing, each of which is capable of producing tremendous headaches, particularly when you have 2,600 depots and bases to consider. In these 2,600 depots and bases there are 37,988 buildings, with a floor space of 459,974,000 square feet. Just think of the upkeep involved.

Shipping, as well as movement control, is a very vital element. In the field of transportation we come to the greatest overlap of all, because transportation is the vital link that connects and vitalizes all elements of supply and logistics. It is continental, intercontinental, and local. Its control is highly involved and at times controversial. The question of movement control also raises the point, should the material be shipped by air, rail, or water? Of course, this ties in with the time phasing, that is, when do you want it, how much, and where? Transportation has become a highly regulated industry. In the military services, the Army has been assigned continental, the Air Force intercontinental, and the MSTS ocean traffic management responsibility.

Cross-servicing--another element--is a form of coordination whereby one department arranges with another to draw on its facilities, stores, or services within a specific geographic area. While a number of cross-servicing agreements are in effect, some of you no doubt recall that the Hoover Commission recommended that more consideration be given to this subject. Some action has been taken by the Department of Defense in setting up the Joint Interservice Supply Support Directive No. 4140.6, which established policies, criteria, and procedures. At the present time 36 commodity coordination groups have been defined and are in use. This also ties in with the single manager concept, which will be discussed later.

Another problem facing those engaged in distribution today is that of excess and surplus material and disposal. While "Operation Clean Sweep" was launched in 1953, it was not until July 1957 that definite policies had been developed.

In 1948 the program for preparing a catalog for all military supply items began. The identification of these items--some 4 million of them--has now been completed. It took eight years and almost $150 million to accomplish this. What were thought to be 4 milllion items turned out to be only 3 million items.

Another important program, which is basic to achieving integration, is the Defense Standardization Program. During calendar year 1956, standardization decisions stopped procurement of more than 190,000 generally similar items. It is estimated that this stoppage alone will eventually save about 2.25 million man-hours annually in supply operations. It is hoped that by 1962 the studies made on standardization will be completed, although it is recognized that the standardization of products is a never-ending process.

Chart 3, page 20.--Now, here's a chart indicating what standardization can do. You notice here that before the study was made, we had 19 gasoline engines and 1,187 parts. Afterward we have five gasoline engines and 59 parts. What a contrast!

For many years, congressional committees, the Hoover Commission, and the Department of Defense have been studying the best methods for military support. The Hoover Commission in reporting to Congress recommended a fourth service of supply, to be administered by a civilian administrator responsible to the Secretary of Defense. In fact, last year a bill was tacked on the Defense Appropriation Act of 1958 for the Secretary of Defense asking him to recommend a civilian-manned agency. As you know, it was not passed; but it did require a great deal of explanation on the part of the Secretary. In the Secretary's letter to Senator Chavez, he cited a series of accomplishments, as well as indicating some of the problems involved in the supply system.

Chart 4, page 21.--One of these is the single manager plan for common-use items. This chart gives you a quick picture of the system and its relationship to the logistic planning cycle. You note it starts with the strategic plan and passes through the requirements, procurement, production, and distribution cycles. At the present time eight different assignments have been made, covering all the services. Fred Muncy listed them for you.

Although the system now is applicable only within the continental United States, the assigned single managers have been requested by the Department of Defense to submit plans and recommendations regarding the extension of the plans overseas.

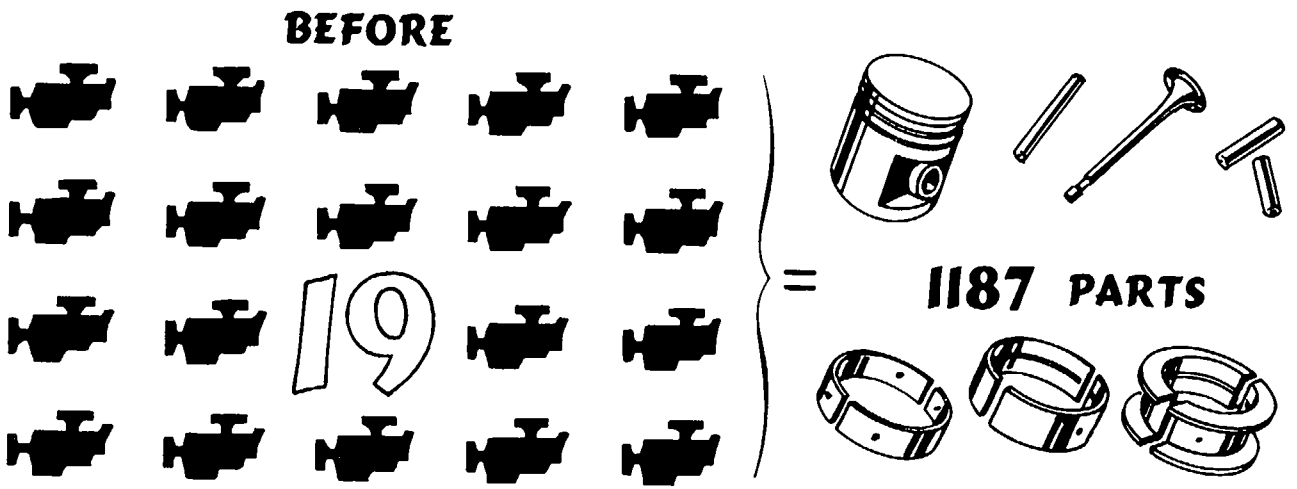
The single manager plan is not a finished product, and further refining is indicated. In concept it is sound, and it is considered that it will prove a valuable device for integrating the logistic operations of all the military departments at considerable savings to the taxpayers for common-use items.

In conclusion, in studying supply distribution we are most interested that you get a good understanding of the organization and management process. Emphasis has been given to its relationship to the other facets of the logistic planning cycle, to the fact that supply management is truly big business, and that it is constantly before the public eye. Certain elements, such as inventory control, financial management, cataloging, standardization, and the single manager plan, have been stressed.

CHART 3

STANDARDIZATION OF GASOLINE ENGINES

(SAMPLE CATEGORY)



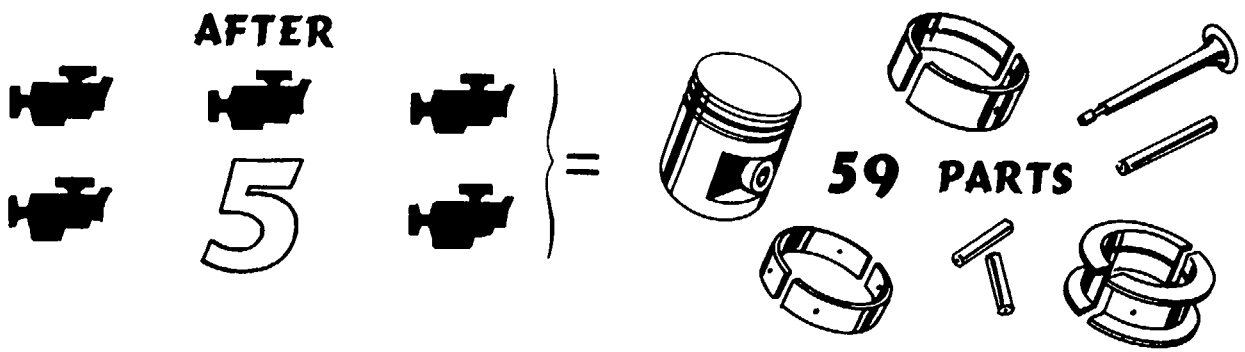
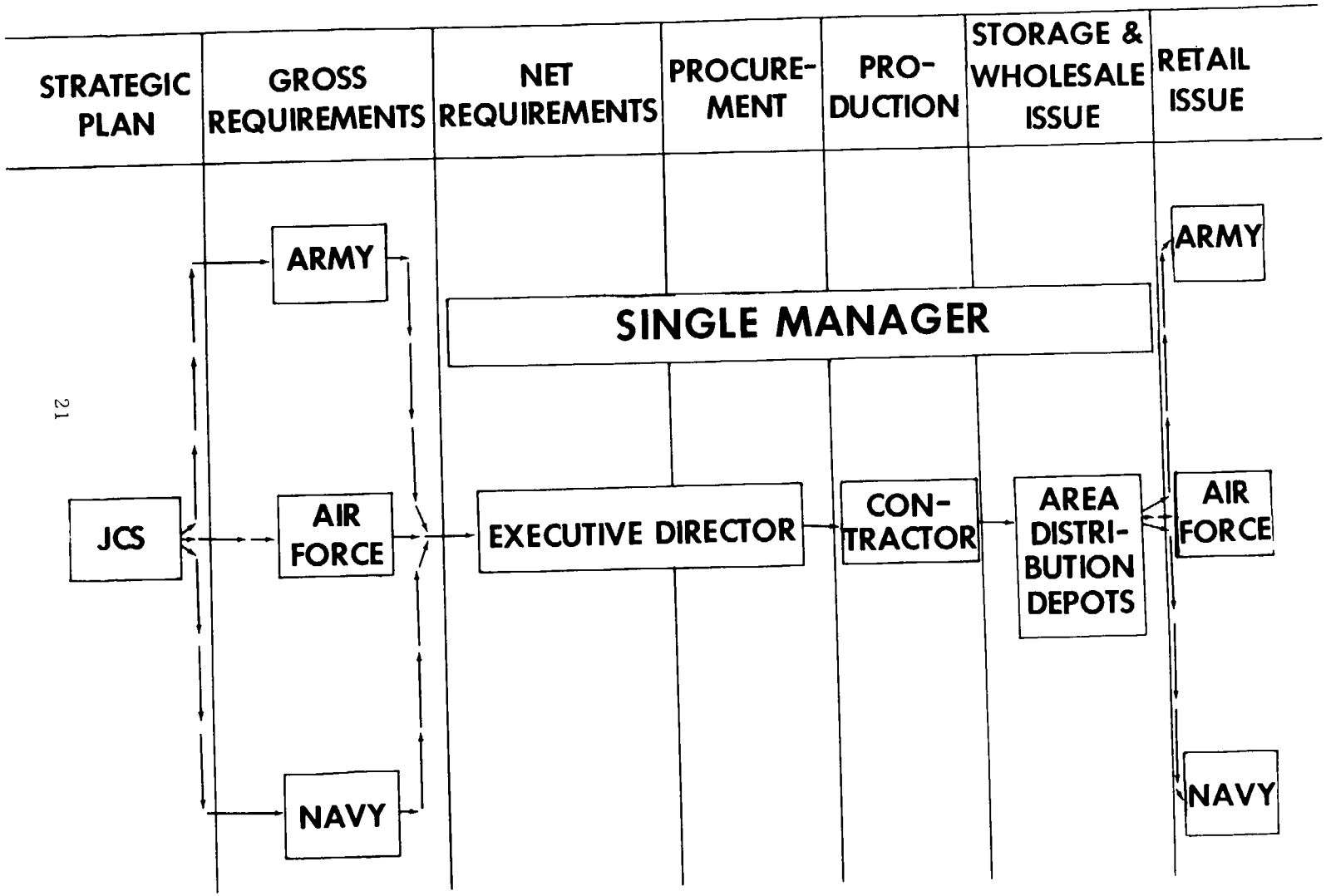


CHART 4

SINGLE MANAGER SYSTEM



Lastly, an efficient organization is indispensable to giving the troops what they need at the right time and the right place, and must be manned by capable, experienced personnel.

Gentlemen, this concludes our introduction to the Materiel Management Unit. Thank you.