

JOINT PROCUREMENT-REQUIREMENTS ORIENTATION

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COLONEL MANN: General Greeley, visitors, and fellow students: Today we are starting, not just another unit, but rather a group of units in our studies of Economic Mobilization. In the past two and one-half months you might say we have been studying our National Resources--manpower, technological ability, and natural resources. The next three units that we are going to study, all of them phases of what I like to think of as the logistics cycle, are so inter-related and so directly the responsibility of the military that logic dictated an integrated presentation. These units are: Requirements, Procurement, and Distribution, and they constitute three of the four phases of my self-termed logistic cycle. The fourth phase of this logistic cycle is Production. That unit will start the latter part of January.

It won't be necessary to explain to you our combined Requirements-Procurement Branch conduct of these units, because you have been given a copy of the monograph, and this afternoon at 1330 we are going to have conferences which should answer most of the questions that will come up.

Ours being a somewhat different approach than we have had in the past, you may wonder why we don't continue that pattern, and why we do the additional amount of work necessary to present these subjects in this manner and fashion. We found in the past that to present these units separately involved certain duplication and overlapping if we wanted to give a complete and comprehensive picture. The amount of time we have for these logistics studies is so short and the problem so great that we cannot indulge in the luxury of duplication. Also, we feel that in presenting them in this form there will be a certain continuity in these various phases we go through in the determination of requirements, procurement, and distribution that will give a better understanding to you as students. And finally, we feel that by presenting them in this manner we will get greater student participation; that is, the experience and knowledge gained by each student will be passed on to all the members of the group.

I am kicking off with Requirements this morning, and a bit of Distribution, after which time we will hear from Captain Richter on Procurement and some of its related subjects.

Now, let's consider the Requirements phase of our logistic cycle. This subject of requirements is to me filled with fascination and I think it is for anyone who really digs into the subject; but for the person who goes on further than the two-times-two-equals-four stage, where the number of men times the pairs of shoes per man per year equals the total shoe requirements, it is a dull subject indeed. I have searched for days trying to find a gimmick or angle to throw a bit of glamor into this logistics study that we are embarking on, and I finally came to the conclusion that it was just about the way Winston Churchill phrased it: "All we can offer is blood, sweat, and tears."

I am unable to glamorize the subject, but I think we can glorify it a bit with a quotation from Winston Churchill in one of his writings. With your permission I would like to read it:

"It often happens that in prosperous public enterprises that applause of the nation and the rewards of the Sovereign are bestowed on those whose offices are splendid and whose duties have been dramatic. Others whose labors were no less difficult, responsible, and vital to success are unnoticed. If this be true of men, it is also true of things. In a tale of war the reader's mind is filled with the fighting. The battle--with its vivid scenes, its moving incidents, its plain and tremendous results--excites imagination and commands attention. The eye is fixed on the fighting brigades as they move amid the smoke; on the swarming figures of the enemy; on the general, serene and determined, mounted in the middle of his staff. The long trailing line of communications is unnoticed. The fierce glory that plays on red, triumphant bayonets dazzles the observers; nor does he care to look behind to where, along a thousand miles of rail, road, and river, the convoys are crawling to the front in unnoticed succession. Victory is the beautiful, bright-colored flower. Transport is the stem without which it could never have blossomed. Yet even the military student, in his zeal to master the fascinating combinations of the actual conflict, often forgets the far more intricate complications of supply."

I think that speaks for itself, gentlemen. It is from Winston Churchill's "The River War," published in 1899.

A knowledge of requirements is basic to practically every enterprise, and Economic Mobilization is no exception. Knowing the resources which have made us a world power, to effectively utilize them in providing national security, with the minimum disruption of our economic system, we must determine effectively the demands which are to be placed on them. These demands, or requirements, for that is what they are, vary in composition and volume depending on whether we are in a period of peace, war, or partial mobilization. Only by measuring the demand in the light of our national resources can we

determine whether our plans for security are within the realm of feasibility. Further, without knowing what will be needed, procurement cannot be accomplished or production cannot be initiated or planned for. In short, there can be no effective Economic Mobilization.

Before going further we should stop and define this term "Requirements." A standard dictionary says they are "needs." This is delightfully simple, but it certainly is not very enlightening. A military definition, from the JCS Dictionary of Common Terms, says in effect that requirements are a forecast of needs for manpower, equipment, supplies, resources, facilities, or services, by specific quantities, under a given set of conditions, for a specified period of time. Now this is a terribly broad definition, and in the next two and one-half months we are going to deal with only the material, materiel, and dollar aspects of these requirements.

There are a number of ways in which we can attack this requirements problem. With your permission, let me start with users. This is a fundamental approach, and will also allow me to emphasize the importance of being realistic in our requirements planning. Basically, there are two categories to requirements--military and civilian requirements. Since in modern wars we have allies, and since we have been pursuing the policy of assisting our allies in strengthening their economy, we have a class of requirements known as foreign aid, which encompasses both military and civilian needs. Military requirements are the reduction of a particular plan with its pertaining forces and contemplated operations to phased quantities of the various items needed. Civilian requirements are the needs of a population to sustain itself under a given standard of living.

Chart I

Now let's look at our chart a minute. That multicolored rectangle there represents our total national consumption, including that destined for foreign countries. That rectangle also, if you will allow me a bit of license, represents our national production capability. I do not mean to infer that our annual productive capacity or capability is static; it most certainly is not. What I do wish to convey is that in any period of time our nation's output is divided between military and civilian categories of needs. The point of division showing them to be about equal is pure happenstance. Actually, in peacetime, as the arrow indicates, the civilian bloc or segment would be much the greater and, when the nation mobilizes, the military segment expands.

In normal times, when the military takes only a small portion of the nation's output, civilian requirements are no problem, and the laws

of supply and demand pertain. In a period of partial mobilization, civilian needs do become a subject of consideration. When the combined military and civilian requirements total more than the nation's ability to produce, it becomes necessary to reduce one or the other to stay within capability limits. The expanded military requirements, which have to be met, then cause civilian goods to be cut back in varying degrees, although not to the point where our standard of living is reduced to any great extent.

Let us carry this concept on to a war period, when military requirements, the munitions of war, do take a sizable percentage of our nation's output. Then, a dilemma arises as to what amount of resources can be devoted to war production or implements of war and what amount must of necessity be retained in its civilian pattern. Essential civilian need, along with war supporting industry, has to be given its slice of the pie. If it isn't, you will not have the munitions of war produced or transported.

I am not going to attempt to explain this morning how this apportionment or balance between military and civilian needs is established. Our series of lectures will develop this. It is sufficient to say that there must be a balance, and that military plans and their generated requirements must stay within capabilities, either present or potential.

You may ask: "How does this affect me?" You may say, as a military man, "It is the responsibility of the civilian population to sacrifice to the extent necessary to provide the Armed Forces with that which they say they need in a time of emergency." It is easy to say that under the conditions of a war crisis that there should be drastic sacrifices on the part of civilians and industry; but the question is: How drastic a reduction in the standard of living and in materials for repair, maintenance, and replacement of plant and equipment can be made without impairing the productive efficiency of the entire economy? There is a point of diminishing returns. It is incumbent on us in the military to be as realistic in our planning as it is possible to be, thus creating the minimum of impact on the civilian economy.

Now let us look at the kinds of requirements we are going to talk about, which appear in both the military and the civilian categories. Listed here are the main types. There are others, but by liberal interpretation they can be said to fall within these. As I have told you, our interest for the next two and one-half months is going to be material and material types of requirements. Manpower you have already studied. Of facilities, that is those connected with industry, you will learn about from the Production Branch. Services are the subject of an entirely separate unit, Public Services. But for all types of military requirements, there is a great similarity in the method of determining needs. For civilian requirements, I am sorry to say this is not true. To date there is no

proven method of determining requirements, and there are no comprehensive, across-the-board statements of needs; and in our military planning we are adversely affected by their absence.

Regarding types of requirements, first, we have end items. They are those in which manufacture or processing has been completed and the item is ready to fill its final intended use. Examples might be a tank, ammunition, petroleum products; yes, or even a can of beans. The component is a part or an assembly which ultimately will be incorporated into an end item. A vehicle engine, a starter, or a generator are examples. They may be peculiar to the military or they may be common to both military and civilian needs. About military facilities, I don't think we need to say much. You all know what they are; but they definitely must be included in the requirements planning, because of the vast amount of materials and labor that they involve. Services are such things as communications, transportation, power, and so forth. They are not the direct responsibility of the military in most instances, so all we need to say about these is that military demands for them must be forecast and passed on to the proper people. You will note that basic materials have been set a bit apart, rather than in the usual line. That is because they are a restatement, in different form, of the other types of requirements. These materials are the raw and semi-processed items, such as copper, steel, and aluminum, that are essential to production. These, among the myriad of materials regularly used, can be both strategic and/or critical, and are thus in times of emergency accorded special handling.

Generally speaking, the military, in establishing materials requirements, must include those needed for all end items, in components other than those common, and the materials needed for the construction, repair, and maintenance of facilities.

Next I think we should look at the basis of military requirements, that is the plans which generate these requirements. Each plan will, in one way or another, be the basis for requirements determination and, in most instances will involve foreign aid requirements. Each plan, to be effective, must be within the national capability from a resources, a production capacity, and an economic standpoint.

First, planning breaks down into current plans, or annual operations plans, and war plans. Annual operation plans culminate in procurement during the pertaining fiscal year and, among other things, provide the basis for materials allocation, when such controls are in effect. War plans, from an economic standpoint, establishes the magnitude of impact on industry and thus provide a means of determining the feasibility of these plans. Also, from the material requirements evolved from war plans, we establish stockpile objectives for our critical strategic materials.

You are probably all familiar with war plans, but indulge me a minute and let me brief them. They fall into three types, based on the nearness of the D-day prescribed by the plan. The short-range plan, that is, one with a D-day within the current year, is called the Joint Strategic Capability Plan. This is the plan under which we fight, comes a war, and obviously begins with only those forces and equipment in being.

The mid-range or the Joint Strategic Objectives Plan has a D-day three years hence. This plan, you might say, adds to the Capability Plan's starting point the force and production improvement hoped for between the ensuing D-days.

The Objective Plan provides us the strategic guidance used in the development and support of the annual budget, as well as providing the basis for industrial mobilization planning by the services, the Department of Defense, and the Office of Defense Mobilization.

Next we have the Joint Long-Range Strategic Estimate. This plan is in its embryonic stage at the present time. It is to be rather broad in its scope, covering requirements for a five-year period beginning approximately five years hence. It will be particularly cognizant of research and development programs and the relationship these programs have to military strategy.

I have not devoted much time to these plans. It isn't necessary. We are going to have Admiral Campbell with us. He is coming Thursday and I can assure you you will get a good lecture from him on them.

CHART II

I think we should take a minute and look at the means by which we generate requirements; that is, the means by which the guidance is developed, the requirements are computed, and they are reviewed and adjusted.

This chart is a schematic presentation of this subject. Actually it shows two cycles--the mobilization planning cycle and the requirements cycle. The two are identical, except that mobilization planning has a fourth phase, industrial planning, in which the statement of mobilization needs resulting from the requirements cycle become the basis for procurement and production planning.

The requirements cycle involves three phases--or I should say three phases are common--the development of guidance, shown by the red arrows and red lines; the computation of requirements, which is shown by the solid blue line; and the review and adjustment of requirements, set forth by the broken lines. The industrial planning is

indicated by the green lines. I put this portion on for completeness' sake, but we will not go into a discussion of this phase, because it will be covered very thoroughly in your Production Unit, which, as I said, will follow the latter part of January.

The first phase of our requirements cycle guidance involves a number of steps. The National Security Council appraises national objectives and sets forth policy in national security matters. These policies, when approved by the President, become the basis for plans which the various executive agencies of the Government are charged with developing. Within the Department of Defense the Joint Chiefs of Staff translate NSC policies into strategic guidance for both current and war planning. This guidance, when disseminated, is very broad in nature and requires amplification in detail by the Services. The Services expand these plans, filling in further data or assumptions as necessary. By this action the plan becomes rather specific as to what is to be done, when, and where. The logistic planners, working concurrently with the operational planners, develop support plans.

Next these plans are reduced to programming which provides the means for accomplishing the plans. In other words, programming sets forth action which must be taken in special fields of interest, to implement the plan, and in all instances takes due cognizance of the length of time necessary for the fulfillment of each of these programs. Examples of these programs are the "troop program," the "installation program," and the various "training programs." There are a number of others, but these serve as illustrations. Programs are the predominant guidance from which requirements are evolved.

The second phase of our cycle is computation. This is a relatively simple portion of the cycle, at least mathematically, if good and timely guidance on which to base computation is available. I am sorry to say it is a rather time-consuming phase of the cycle because of the vast number of items that are involved, and also because all too often there are program changes which require the recomputation of requirements--after the job is done, on the basis of the changed programs, you go back and do it over again.

On this subject of requirements computation I want to philosophize just a moment--I think probably too much time is taken in the computation of requirements. Often more work actually goes into it than the intended use of the statement of requirements justifies. If the requirements are to be the basis for procurement without qualification they have to be as accurate as possible, because here the Nation's resources, that is, the dollar and the material resources, are applied. But if requirements are from war planning, I have the feeling, since these plans are a series of assumptions regarding the future--a forecast of requirements relatively far into the future, they don't justify the meticulous detail and

accuracy that often goes into them; because, by virtue of this detail and accuracy, the time taken is much longer than we can really afford to invest.

According to the Program for Planning, they say that we have twelve months to develop the service plans and reduce them to requirements. Gentlemen, it has never been done in twelve months yet--at least it hadn't up to the time I came back to the College. It may have since, but I don't think so. Twelve months is just a portion of the time it takes. If we accept requirements of a lesser degree of accuracy, but get them in on time so we can accomplish the cycle of planning annually--they intend to revise these plans annually--if we can speed the development of requirements so that the results of the old plan are available before the start of a new one, and thus reflect this experience and knowledge gained, we will truly be making progress. The purpose of the requirements, the time you have available for the job, and the adequacy of the guidance on which you must base the computations should dictate the approach or the method of computation by which requirements are derived.

This is just my feeling. You think it over. If you disagree, O. K. If you agree maybe we can find a way of doing something about it.

I am not going into the computation of requirements, that is, the mechanics or the techniques. It is set forth in your monograph. I would probably end up with my captive audience, asleep. So I ask that when you read it you pay special attention to this portion.

Thus I can pass on to the last phase of the requirements cycle, review and adjustment. About the word adjustment, I want to talk just a moment. The term, "adjustment and requirements," I use with a bit of hesitancy for it is a misnomer. Actually, requirements, if they are adequately derived from plans, are fixed, and any deviation from those quantity statements will tend to jeopardize the plan. We talk about adjusting requirements, but really we don't. Should less be forth coming than is asked for, then the difference necessitates an adjustment of the plan and the programming, either this or you accept the deviation as a calculated risk. The latter I say in quotes. So at least in theory, you do not adjust requirements. You adjust the plan and the programming, and thus they generate new requirements which are in keeping with the political economic or industrial ability to provide.

Now I go back to using the word "adjustment" this time with your indulgence. The channel that review and adjustment takes depends on the intended use of the requirements. Regarding requirements in support of the annual budget, I am going to defer to our guest speakers. They will cover the subject most adequately. I do want to say this, in furtherance of what I have already said--adjustments in this area usually take the form of cuts in requirements funds. This action is particularly true in the case of the OSD Comptroller, the Bureau of the Budget, and the Congress. There is a fallacy in this line of action, however, because a cut in one budget area invariably impinges on others; so that, if you

want to end up with a balanced operation, you have to replan, reprogram and recompute. So much for requirements in support of budgets.

Mobilization requirements are requirements generated by war plans, and are reviewed by the services for accuracy of computation, adherence to program guidance, and balance between programs. There are others, but these are the predominant points of consideration. After approval at departmental level, they are passed to the Assistant Secretary of Defense (Supply and Logistics), where they are analyzed for balance between the services, from a standpoint of production capacity available to the military and on the basis of availability of critical materials. When they do this, they apply "relative military urgencies" which have been furnished them by the Joint Chiefs of Staff. Next these services requirements are consolidated and, in conjunction with the Office of Defense Mobilization, they are given an industrial feasibility test to see whether the plans and generated requirements are within the realm of capability from a dollar--or I should say--an economic standpoint, a production-capacity standpoint, and a resources standpoint. Should infeasibility be indicated, its extent or degree is established and recommendations are made to the Joint Chiefs of Staff as to possible actions which may be taken. These recommendations may be to expand production capacity in the deficient commodity areas; to replace the force build-up called for in the plan; to cut-back of our forces; or to discard the plan in its entirety because of being too unrealistic.

So far we have talked mainly of our own requirements; that is, military and to an extent civilian requirements. Foreign Aid requirements must be taken cognizance of in the accomplishment of this industrial feasibility test, as must be our civilian requirements. Herein lies the point of difficulty. As I said, we are adversely affected in our requirements planning by not having well established and comprehensive civilian requirements. All of these requirements military, civilian, and Foreign Aid are drains on our national assets and, to effectively determine feasibility or to apportion industrial effort you must have representation of all these demands.

I have spent most of my time this morning talking about the requirements phase of the Logistic Cycle. I have not meant to imply that the distribution phase is not of importance; because it certainly is, as is evidenced by the attention and--oftentimes, I might say, criticism--the press and the Congress have given to the supply management practices of the military. It is not necessary to go into an extensive discussion of the distribution aspect, however, because we have a custom tailored monograph which will be issued to you within the next three or four weeks, when it comes off the press. It was prepared by Colonel Holmes and Colonel Kale especially as a background for this unit distribution being a short unit, we didn't feel that it provided the time for extensive reading as do some of the longer ones. This

monograph has been developed to give you an understanding of all the service supply systems. It will explain to you and set forth the Department of Defense supply management policies and problems. It points out trends in unification, although it does not comment on the validity of any of these actions, past, present, or future. That is left entirely to your own judgment.

I do wish to remind you that this subject of distribution is not a new one. It has been with us as long as war itself; but with the advent of total war and the increased technology in war, the volume and the intricacy of the munitions have reached such proportions that it becomes impossible, from an economic or a resources standpoint, to provide the military with all they think they should have to provide proper national security. Therefore it becomes incumbent on us to be sure we wring out every ounce of security potential in the dollars that are appropriated for our military use and build-up.

The most promising area for the attainment of economy in the field of distribution logistics is the consumer phase; that is, from the receipt of finished goods into the military supply system through "issue for use or consumption." To borrow a thought from our good friend, Captain John Hayes, what we need to do is concentrate on "dynamic logistics." This he defines as a means of obtaining effective support with a minimum of inventory by optimum use of transportation and communications.

There is too great a tendency to think of logistics as something static--in terms of T/O & E's, T/A's, supply lines, and established levels of supply in those lines. We fail to consider in our logistic thinking the wonderful possibilities of our transportation system, land, sea, and air, and of our effective media of communication by which this transportation system can be put to economic and productive use. We all know the advantage of air transport; your Navy files are particularly familiar with "mobile logistic support"; and, the way the Red Ball Express carried on the war in Europe when the traditional logistic support systems broke down is a matter of military history.

If, instead of increasing inventories, we step up communications and transportation as the demand for logistic support increases, we can do what our American industry has done; namely, to operate on small inventories and release vast amounts of money, material, and manpower to more productive and economic uses. To do this we will have to rely greatly on our American ability for management and organization, and we will also have to have maximum feasible unification in our logistic support.

If we do these things, they should pay off handsomely in many areas: fewer depots and pipelines, and lower inventory levels in those that remain; a more streamlined logistic support organization,

with greater flexibility and responsiveness to command; and, last, but not least, a more effective and economical support of operations. One authority in logistics has said that we can increase our efficiency by as much as fifty percent in this field of distribution.

Gentlemen: Now take a break, after which time you will hear from Captain Richter.