

PROCUREMENT PRACTICES

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 Chief of the Procurement Branch, ICAF.....1

SPEAKER--Dr. Howard T. Lewis, Professor of Marketing,
 Graduate School of Business Administration,
 Harvard University.....1

(No general discussion.)

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Professor Howard Thompson Lewis, Professor of Marketing, Graduate School of Business Administration, Harvard University, was born in Oshkosh, Wisconsin, on 15 July 1888. He was graduated from State Teachers College, Oshkosh, 1907 and has received degrees as follows: A.B., Lawrence College, 1910; M.A., University of Wisconsin, 1911; LL.D., Lawrence College, 1936 and Bethany College, 1940. He is currently Professor of Marketing at the Graduate School of Business Administration, Harvard University. He has held many positions at universities throughout the country, including those of dean, College of Business Administration, University of Washington; associate dean, director of research, and editor, Harvard Business Review at Harvard. In 1925 he was chairman of the National Foreign Trade Commission to the Orient. During 1926-1927 he lectured at R. Institute Superiore di Scienze Economiche e Commerciali in Rome, Italy. In 1940 the National Association of Purchasing Agents awarded him the Shipman medal--the highest award given by that organization for the advancement of purchasing. Dr. Lewis was associated with Mr. Donald Nelson even before the War Production Board was formally organized and remained with that group until it became a going organization. Professor Lewis has written many books, the latest of which, "Procurement: Principles and Cases," was published in 1948. At the present time, in addition to his teaching, he is Chairman of the Editorial and Financial Boards of the Harvard Business Review.

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CAPTAIN MILLER: In presenting our course on procurement, an attempt has been made to tell you about procurement from various viewpoints. We have already heard about procurement from the viewpoint of the military. Next week we are going to hear about procurement from the viewpoint of industry. But this morning we are fortunate in having with us a man from the field of education. He is going to tell us, from the educational viewpoint, about "Procurement Practices."

Our speaker this morning is Professor of Marketing at the Harvard Graduate School of Business Administration; he conducts a course there on industrial procurement.

It is a pleasure to welcome back to the Industrial College, Professor Howard T. Lewis.

PROFESSOR LEWIS: I have been asked to discuss with you this morning certain aspects of industrial procurement, a term which I understand to mean the acquisition by manufacturers of such items as raw or semiprocessed materials; component parts; maintenance, repair, and operating supplies; and equipment--all of which are to be used in the production of what is, for the particular manufacturer in question, a finished product for sale. This assignment, by definition, relieves me of any consideration of military procurement. With perhaps somewhat less justification, I shall also exclude the purchasing problems of industrial distributors of one kind or another who purchase for resale rather than for manufacture. Finally, I should say at the outset that I am not going to talk about the details of industrial purchasing organization or procedure. Though the importance of such matters can very easily be underestimated, we are concerned this morning with somewhat more fundamental problems.

The assignment thus given me is one I am most happy to accept. It must be apparent to every thoughtful officer present, whatever may be the nature of his immediate responsibility and interest, that to the manufacturer on whom the military must depend for materiel, sound and efficient procurement is every bit as important a factor in his ability to serve the defense effort as it is to the armed forces in the performance of their mission. The effectiveness of both is quite as much determined by what they can get and the efficiency with which they get it as it is by the skill with which it is used when once acquired.

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Furthermore, for the contracting officers in the armed services, there is an immediate reason for familiarity with the essentials of industrial procurement. A current form of the cost-plus-fixed-fee contract contains the proviso that "the contractor shall to the extent of its ability procure materials and services in the manner most advantageous to the Government, price and other factors considered," a clause which clearly becomes meaningless unless the contracting officer is himself in a position to judge as to whether or not the contractor's procurement is sound and efficient according to industrial standards. It certainly does not mean a mere auditing of the supplier's invoices in order to be sure he paid the price he claims to have paid. The contract also provides, in a section dealing with subcontracts, that "unless the contractor's purchasing system shall have been approved by the Contracting Officer, contractor shall not, without the written approval of the Contracting Officer, make any contract with any other party for furnishing any of the completed or substantially completed articles, spare parts, or work herein contracted for." Similarly, a fixed-price contract provides, with reference to subcontracts, that "no contract shall be made by the contractor with any other party for furnishing any of the completed or substantially completed articles, spare parts, or work herein contracted for without the written approval of the Contracting Officer as to sources; and if this contract contains a price redetermination clause, no such contract shall be made for an amount which exceeds \$25,000 or 10% of the amount of this contract (whichever is less) without the written approval of the Contracting Officer." (Note that the latter does not restrict the required approval by the contracting officer to source alone, and the juxtaposition of these two in the same subsection is significant.)

The contracting officers, therefore, have a very special responsibility for familiarity with industrial procurement practice. But I hasten to add that I am not addressing myself to such officers alone, for in the words of a prominently displayed placard which I am sure many of you have seen, "Procurement is Everybody's Business."

With these general introductory thoughts in mind, What is the basic nature of industrial procurement? I think we should all agree it is to get what is needed, when it is needed, delivered where it is needed, and at the best price. Or, for the sake of perspective, let us put the same idea another way.

The basic job of a production department is to produce at as low a cost as possible certain finished products, these products being designated by sales, engineering, and production jointly. These products will (it is hoped) then be sold at a profit over and above cost. In the processing of this end product, the production department, of necessity, uses certain raw or semifinished material and component parts. Materialwise, therefore,

its requirements demand the proper grade or quality, in sufficient amounts to maintain operations at as low a price as possible. The production department itself is not responsible for the price paid for these materials, nor does it acquire them. The amounts of such commodities in stock and on order at any given time need not concern it, provided the materials are on hand for use as required by the plant. Provided the quality is right, the source from which they are obtained is not its concern. The procurement of these materials is, or should be, in the hands of some one person (or more persons) whom we may designate, for lack of a better name, the "buyer."

Put this way, it all sounds fairly simple. But, so far as industry is concerned, the more we examine this somewhat elementary statement, the more involved does its application become. And I know of no better way of bringing out the nature of these complications than to indicate some of the major trends that, to me, at least, appear discernible in this extremely important area of procurement.

There are five such trends to which I should like to refer briefly. They may be summarized as follows:

1. A growing recognition of the integral interdependence of design, production, and supply in determining proper quality.
2. A growing awareness of the essential nature of inventory control, so far as production materials are concerned.
3. A corresponding organizational trend to consolidate the several phases of procurement into one executive department under some such title as that of "materials management."
4. An increasing concern over the need for acquiring and developing the right type of procurement personnel.
5. A growing recognition by top management of the basic importance of procurement as one of the major functions of business.

These five interrelated trends seem to me to be fundamental. Others might place the emphasis elsewhere, and admittedly the list is not complete. A growing participation of purchasing executives in the acquisition of major equipment, for instance, appears to be observable. There is an increasing adoption of the principles of simplification and standardization. Procurement techniques are being improved upon, and these "tools of the trade" are being used much more effectively. All these, and more, belong in the total picture, but the five which I have enumerated would appear to be the most fundamental.

The first of these trends--a growing recognition of the integral interdependence of design, production, and supply in determining proper

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quality--brings into play considerations of price and availability equally with those of engineering and design. Put rather bluntly, this means that when a design or development engineer finally emerges from his ivory tower with, "This is it and nothing else will do" or the production manager says, "We have always used this particular brand and have no intention of changing," his words no longer carry the conviction they once did, nor do they go unchallenged. For in the progressive company--and that is the kind we are talking about--the procurement officer himself as a member of management has not only the right, but the responsibility, of challenging these tentative decisions if, and when, he sees good reason for so doing. Or to put it in another way, the engineer and production manager have learned the value of seeking the collaboration of the procurement officer before exercising their unquestioned right of making the final decision.

What is the thinking behind this development? The clue is to be found in recognizing the true meaning of quality. Quality is that which fits a product to a given use. A given product or grade of material is not simply good or bad; it is good or bad for a specific purpose, and the word "quality" is meaningless apart from the use in view.

To this thought must be added another; namely, that "quality" is a combination of characteristics, not merely one characteristic. Furthermore, the specific combination finally decided upon is almost always a compromise, since the particular aspect of quality to be stressed in any individual case depends largely upon circumstances. In some instances the primary consideration is durability. In other instances the lifetime of the item of supply is not so important; absolute dependability in operation becomes more significant. Certain electrical supplies will suggest themselves as illustrations of the latter; while a long life is desired, it is more important that the materials always function during such life as they may have than that they last indefinitely.

Assuming dependability in operation and a reasonable degree of durability, the ease and simplicity of operation may become the determining factor. For instance, it is not essential that a typewriter last indefinitely; and the mechanism of the modern typewriter is such as to make it dependable under all ordinary usages. Given these two characteristics of reasonable life and dependability which are more or less standardized among all the various types of machines, the determining factor is the ease with which the machine can be operated.

All this adds up to the fact that what constitutes a satisfactory quality depends largely upon what a user is seeking in a particular product.

"Best quality," technically speaking, is that combination of physical and chemical characteristics which is best suited to the intended use. But it should be equally clear that mere technical perfection is by no means the whole story. No matter what degree of technical perfection for a given use an item may have, it must be reasonably procurable; otherwise it is senseless even to discuss the possibility of using it. Or if the cost is so high as to be beyond the bounds of reason, one must sacrifice something in technical quality and get along with an item that may ideally be somewhat less suitable. Or if, at whatever cost or however procurable, the only available suppliers of the technically perfect item lack adequate productive capacity or financial and other assurances of continued business existence, then, too, it must give way to something else.

Solder provides another example. Various combinations of lead, tin, zinc, cadmium, and silver can be used to produce a thoroughly satisfactory solder. In all such cases, where various alternative materials are suitable for an intended use, or where various combinations of materials can be varied and still give substantially equally satisfactory performance, it is no more than common sense to say the decision as to which to use should depend upon relative cost and procurability.

Obviously, also, frequent reappraisals are necessary even when a workable balance between technical quality and economic quality has once been established. If, for example, copper rises from 14 cents a pound to 25 cents or more, while magnesium drops from \$1.25 a pound to 20 cents, and if aluminum, over the years, drops substantially in price, the proper balance to which we have referred needs re-examination. The experiences of World War II are still too fresh for us to forget the fact that many an item, a component, or even a finished product rated as "essential because theoretically superior" had to give way to one technically "less ideal but procurable."

Now, procurability and cost (bearing in mind that we are talking about ultimate cost, not lowest unit price) are scarcely matters with which technical men, however expert in their own field, can be expected to be thoroughly familiar. These matters lie peculiarly within the area served by the procurement officer.

So one is forced to the conclusion that in any manufacturing organization, neither the purchasing officer nor the technical expert is likely to be familiar with all the factors that are involved in determining the "best buy." Moreover, in the large-scale organization--and this includes the military--there is a definite tendency for specialists to act independently and to fail to consider the effect of their actions either on others or on the total result. The continual development of, and insistence upon, special, nonstandard, or obsolete specifications in lieu of equally

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acceptable, up-to-date, standard, commercial specifications are examples of the sort of things I am talking about. So, too, is the extent to which some using departments, through inertia, lack of imagination, or a ridiculous attitude of infallibility, undertake to restrict purchasing officers to "single source suppliers."

To illustrate somewhat more specifically the thoroughness with which the so-called "product value analysis division" within the purchasing department of one major company attacks its problem, let me list the points on which it challenges at one time or another every part and each material it is asked to procure:

Does its use contribute value; and, if so, how much?

Is its cost proportionate to its usefulness?

Does it need all its features or can it be simplified?

Is there anything better for the intended use?

Have we checked against unusual but available forms of raw material--
preplated steel, clad metals, and so forth?

Can we use a lower-cost material which will perform equally well?

Can we use a higher-cost material which by nature and properties will
afford a simplified design and a lower-cost product?

Can a usable part be made by a lower-cost method?

Can a standard product be found which will be usable?

Is it made on proper tooling, considering quantities used?

Do material, reasonable labor, overhead, and profits total its cost?

Will another dependable supplier provide it for less?

Is anyone buying it for less?

Note that this approach places primary emphasis on the responsibility of the industrial buyer to get material acceptable to the user and adapted to the use intended at the lowest cost consistent with these underlying objectives.

And may I digress for a moment to inject another thought concerning the industrial purchaser's attitude toward this matter of price analysis. Whatever may be the situation within the Government, in industry, when the buyer analyzes a price, he is vastly more concerned about questions of basic cost analysis than he is about profit analysis. Certainly, he wants his suppliers to make a profit, and just as surely he does not want to have to pay a price which yields an exorbitant profit if he can help it. But the fundamental factor in all this analysis is cost of production and sale. So the buyer tries to dissect suppliers' costs with the utmost care. After all, such costs do constitute the largest part of the final price, and just as surely no analysis of profit has any significance except in terms of cost. With this fundamental and very important principle in mind, the buyer must either be a cost accountant in his own right (note I do not say merely an accountant, for the ordinary auditor or financial accountant, good though he may be in his own field, will not fully qualify in production cost analysis) or he must have the services of such an expert in cost

analysis at his disposal. The cost accountant need not be the negotiator but the negotiator badly needs the expert technical advice he can give.

But to return to our main theme---clearly, since suitability for the intended use is one prime essential of proper quality, and since final decisions on suitability are peculiarly within the province of the technical expert or the engineer, a very difficult problem, procurementwise, constantly arises. If specifications are to be set first and finally by the engineer, then the purchasing agent either has to accept them without question "as is" and do what he can to get a good price, or he has to reserve the right to challenge the specifications or to refuse to buy until an agreement has been reached. His problem is made none the easier by the fact that often the amount required and the time the item is needed are also specified in such a way as to give him little opportunity to maneuver.

The answer to this dilemma is by no means simple, but it is not a reasonable solution to assert that technicians are never to be challenged, any more than it is reasonable to say that the procurement officer should decide questions of suitability. Industry, under stress of competition, is finding a way to reconcile such differences of opinion through cooperation. One step has already been made by advanced management when it recognizes the true nature of what we call "quality." It is definitely making progress toward the second step--that of securing that reasonable measure of cooperation so essential to success.

The second trend--a growing awareness of the essential nature of inventory control, particularly so far as production materials are concerned--is based on the fact that the most difficult problems in this area are related to purchasing and not to production. Whatever may be true of governmental procurement, in the private, industrial organization serious doubts are increasingly being raised as to inventory control being basically a matter for either the design engineer or the production manager to determine.

These doubts as to the soundness of placing inventory control wholly in the hands of production personnel rest partially on experience and partially on rational analysis. Experience seems to indicate that a production man is far less concerned with a reasonably balanced inventory, or even properly timing his purchases, than he is with being certain that he never, under any circumstances, runs short of supply, with the result that he is very prone to overstock--sometimes to a fantastic extent. The real dangers in the inventory area are not shortages but overages.

The rational basis for divorcing inventory control from production is found in the realization that management of inventories constitutes a wholly different type of problem from that of machine operations, plant layout, or the treatment of labor. Thus, to argue that because

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the production department actually processes the material, it therefore knows best when and how much to buy, makes no more sense than to say that because the production department uses a commodity, it therefore should actually buy it. In virtually all up-to-date manufacturing companies, this latter concept has given way in favor of an independent centralized purchasing department. It is the production department's job to determine its requirements, to set up a production or usage schedule, to determine when it will require certain materials, and at what rate they will be consumed. And that is where its responsibility ceases. So long as it has what it needs when needed, there is no occasion for it to worry.

The real problem of inventory control, however, only begins at that point. With a minimum in mind, under ordinary circumstances, the question then becomes one of how far to buy ahead, when to go into the market in order to take advantage of the "soft spots" pricewise, and how fast to move the material into the plant. This calls for a different type of experience, a knowledge of a different set of facts, and a different form of judgment.

It is on the basis of experience and analysis, therefore, that there has developed a tendency to set up an independent unit in charge of inventory, or at least to place its management in the hands of a procurement officer rather than a production, financial, or accounting executive. And this, I believe, is in line with, and perfectly consistent with, a trend toward looking upon inventory acquisition not as a source of so-called inventory or speculative profit but essentially as a means of keeping material costs (and hence production costs in so far as they are based on material costs) as low as possible.

This is not the place to discuss this whole matter of speculative profits as related to raw material purchases. I can only say that there is an increasing skepticism about the soundness of a manufacturer's seeking to increase his profit through commodity speculation. In fact, there are many people--and, in general, I am one of them--who doubt the very existence of such profits on production inventory, the arguments of some accountants and legislators to the contrary notwithstanding. In any event, my main thought is, I trust, clear. Inventory control is a top-management procurement job inseparable from purchasing.

The third trend--it is closely related to the preceding one. Partly as a result of the thinking on this matter of inventory control, there seems to be, at least in the larger companies, an organizational trend toward placing the several aspects of this major function of procurement (including inventory control, purchasing, receiving, stores, and in some instances even inspection) into one executive department for purposes of coordinated administration--a department known by some such title as "materials management."

On this point it is necessary to proceed with somewhat less assurance, for the emerging pattern is by no means altogether clear. Yet the need for reasonable coordination of these various activities becomes increasingly obvious.

There are many ways in which this need shows up. It has already been pointed out, for example, how intimately the questions of price, quality, and selection of suppliers are related to that of quantity. The inventory problem just discussed, however, provides the clearest illustration.

Of course, from the production planning department must come not only the essential data regarding the kind and quality of process material, component parts, and supplies needed but also the production requirements schedule. But what company wants its procurement policy restricted to meeting minimum material operating requirements? Immediately we are in the area again of questions about advance commitments, most economical buying amounts, reserve stocks, and so on; these and many similar questions are essentially inventory control problems, but answers cannot be had except as related to strictly purchasing decisions any more than purchasing decisions can be decisive without regard to questions of quantity and quality.

Indeed, the negotiation and inventory control (and, I may add, very often that of physical storage and issue as well) aspects of procurement are so integrally related that as a problem in administration they can best be handled, under ordinary circumstances, as parts of the same organizational unit. The needs of administrative efficiency, only under unusual conditions, can best be served in any other way. And this conclusion is not vitiated by the fact that negotiation, on the one hand, and inventory control, on the other, each calls for a somewhat distinctive type of personnel to formulate judgment on somewhat unlike sets of values.

The fourth trend--an increasing concern over the need for acquiring and developing the right type of procurement personnel--implies the need for men qualified to measure up to the higher standards of performance recognized as imperative under modern, competitive conditions. No concept of procurement however sound, and no plan of organization however attractive on paper, is workable unless the men who do the actual work are qualified for the responsibilities placed upon them.

There is nothing new in all this. But I should like to stress the fact that just as there are trends in industry toward placing the function of procurement in its proper perspective, so, too, is there an increased and persistent effort to find and to train men to perform that function adequately. Thus, it is not surprising to learn that some really constructive as well as critical thinking is being done in this area.

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Because there are very real differences among individuals with reference to their fitness for particular kinds of jobs, and because procurement is essentially unlike production, engineering, or any other major function, this kind of responsibility calls for a type of personnel with training, experience, and personal qualities unlike those required for other executive positions.

The responsibility for purchase negotiation is one fundamental characteristic of the industrial procurement function. It is the requirement of the ability to negotiate objectively, plus a knowledge of trends in products and processes, that makes industrial procurement basically distinct among the functions of business administration. Moreover, although procurement responsibilities should, of course, be discharged in cooperation with the other functions of a business, this does not mean that they should not also be discharged positively, constructively, and at times even aggressively. These facts determine the type of men who are needed.

The desirability of a peculiar interest in this type of work, and of enthusiasm for it, should be clear. Furthermore, if it is true that the basic personal qualities of integrity, vision, willingness to cooperate, judgment of values, and the like, are not fundamentally different from those called for in any good executive, at least they are required in a very high degree and with emphasis upon certain traits not required in quite the same proportion elsewhere.

This is not to say that men are necessarily born with inherited traits that make them good procurement officers (or, for that matter, sales managers or engineers). Assuming that any young man is intelligent and adaptable, he may well become a specialist in procurement or in almost any other field. Through human associations and experiences which develop in him a real interest in this function, he becomes happy and proficient in it.

When management looks upon procurement as an important function, chooses intelligent and adaptable personnel, and gives them responsibility and encouragement, then new and old alike develop capacity in their jobs. On the other hand, no matter how capable a man may be or how broad a concept of procurement he may have, he himself will have a most difficult time convincing a management which is illiterate procurementwise of the fact that the function has any broad significance, and such a management, in turn, will have difficulty in persuading capable young men to enter its employ.

The significance of all this, so far as the actual recruiting and developing of procurement personnel are concerned, is just this; Industry is becoming increasingly aware that unless procurement men

at whatever level are well selected, properly trained, adequately paid, and imbued with a proper understanding of and attitude toward their responsibilities, little can be hoped for in the way of sound procurement. On the other hand, when this admittedly high standard is reached, there is almost no limit to what such men can accomplish for their company.

There is much to be done before this goal can be reached. For while there are thousands of superb procurement men doing yeoman service in their chosen field--men who are alert, keen, capable--yet there are thousands more who fall far short in their performance. They operate as mere clerks, with limited or no vision; they seek to avoid rather than to accept responsibility; they have little real interest in their jobs and are quite content to operate within the narrow scope of an assigned task rather than to develop any real understanding of procurement.

Having said this, I hasten to add that real progress is being made. Without taking your time to prove my point, I shall simply say that never in the history of business has there been so much interest in the study of procurement problems or so many qualified men vigorously attacking these problems. Of all the trends I have mentioned, none is more pronounced than the stress on procurement capacity and training.

Finally, the fifth trend--a growing recognition by top management of the basic importance of procurement as one of the major functions of business--would make procurement coordinate with and not subordinate to sales, engineering, or production.

Note that the statement reads "a growing recognition." This implies three things: That such recognition has not always been apparent in the past; that there is now developing a definite feeling that it should be given more consideration; and that its place as a major function is well established among progressive manufacturers. To the careful student of business, this is not surprising but, on the contrary, inevitable.

The thinking that lies behind this starts with the conviction that the first responsibility of the management of any business seeking to keep our economy dynamic, and at the same time reasonably stable, is to operate that business profitably--a responsibility it owes to its stockholders, its workers, and the public. Unless management can make a profit, it can accomplish little else, and sooner or later it will be rated a failure.

But just whom do we mean by "management"? Is it the board of directors, the president, the executive committee, or the general manager--the chosen few who traditionally have arbitrarily decided both the policy and the method of carrying it out? There are still companies today, many of them, operating on this basis--and, it must be added, with at least apparent success. Moreover, in any company some one person must in the last analysis assume final responsibility for making decisions.

Nevertheless, the experience of business in this complex society of ours is demonstrating that, except in abnormal cases of rare managerial genius, and even then over only comparatively short periods of time, the pooled judgment, initiative, enterprise, and ideas of an entire organization produce better results in terms of profit and of progress than does the autocratic administration of one man. In other words, pooling the judgment of those in a company qualified to contribute and then channeling that judgment through a capable administrator is the most likely way of insuring that business will meet its responsibilities.

This pooled judgment, specifically, means the combined judgment of those persons particularly qualified to perform the essential basic functions of a business—the chief engineer, the production manager, the sales manager, and the procurement officer. The last of these is now being put on the "first team," and he is being put there because of the conviction that a manufacturing company cannot make and sell a product in a competitive market unless the materials and component parts out of which it is fashioned, and which represent 50 to 60 percent of its manufactured cost, are procured efficiently. In short, the qualified procurement officer himself constitutes an integral part of what we term "management."

This means that the procurement officer is no longer a mere clerk, nor is he a subordinate reporting to a production chief; rather, he is an officer of first rank in his own right, so recognized because of his knowledge of materials, sources, markets, prices, and negotiating practice, a knowledge and experience possessed to an equal measure by no one else in the organization. This recognition comes about not by virtue of organization charts, executive directives, or mere definition of responsibilities, but rather because the procurement officer actually has shown that he contributes something of significance to the "judgment pool." It is the gradual penetration and willing acceptance of this fact throughout the entire organization that has led, as I put it earlier, to a growing recognition of the basic importance of procurement as one of the major functions of business.

I cannot close my comments on industrial procurement without making a brief reference to one of the most perplexing problems that confront management in this area. I refer to the question as to how to evaluate the efficiency with which its procurement activities are being handled. Even with a clear conception of the true nature of a particular function--in the absence of which it is obvious that no progress on this front can be expected--it is still a very difficult task to appraise just how well the specific organization charged with the responsibility for part or all of its performance is measuring up to that responsibility. And this is true regardless of the particular function in question, whether it is the legal department, sales, advertising, accounting, or production.

Take the production organization as an example. One can scarcely say that the standard of performance is to be simply volume of output, or actual unit costs of production, or rate of labor turnover, or the percentage of finished units rejected, or the number of days a shop is not working. Again, the number of tangible, measurable items which one would like to have for check purposes are many and usually available. But how these data are combined, interpreted, and evaluated is of first importance. And beyond them--or, perhaps better, as a part of them--are the many intangible factors which it is proper never to overlook in deciding on just how efficient a given department can be said to be. And when one goes on to attack the same problem with reference to engineering and design, or to research, the handicaps to any exact measurement are equally obvious.

In the area of procurement, the difficulties of evaluation appear to be, if anything, even greater than in the other departments. For one thing, there are still business managements which lack any clear concept of just what procurement is or how it is related to the other functions of business. For another thing, the entire procurement function is seldom the responsibility of one department; stores, incoming traffic, and inspection of purchased materials, for instance, are more commonly than not divided among various other departments, whereas the sales, production, and legal functions are very generally fully centralized and definitely segregated. Furthermore, there are many important intangible contributions to be expected from a well-conceived, properly administered procurement department, and they are at least as difficult to measure as those made by any other division of a business.

Yet despite all these difficulties to a measurement of departmental efficiency, something does need to be done. Of course, some sort of an evaluation is, in fact, made in every case. The question is merely one of whether the judging that does take place is done consciously or unconsciously, with or without adequate basis. The unfortunate thing is that too often it is done neither wisely nor well.

What we are after is something which is worth while because it is practical, concrete, and usable. The need for realism can be emphasized in another way. There are thousands of instances in which companies have called upon consultants of one sort or another for advice with reference to their procurement division. Rarely, if ever, did the seeker for help ask for a mathematical index of measurement; and even more rarely, if that be possible, did any consultant ever undertake to set up or to use one. What management does say is: "Will you take a look at our procurement department and see what you think of it? Is it doing as well as we have a right to expect? Have you any suggestions concerning how it could be improved?" If consultants, whose business it is to evaluate, have made no use of specially devised standard cost, budgeting, and other indexes,

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neither have internal auditors, whose function is likewise to check and to evaluate, used these devices. In this connection, too, it is interesting to note that, in spite of all the discussions held under the auspices of the National Association of Purchasing Agents over "yardsticks for the measurement of performance," never, to my knowledge, has any effort been devoted to determining exactly how such yardsticks are to be used once they have been devised.

Granting, then, the futility of attacking the problem through statistical formulas or indexes, our task is the simpler one of trying to determine by practical means whether we can better the performance of those particular responsibilities that have been assigned to the department by the company's management. If we do not thereby come out with something quite as formalistic and comprehensive as some people might hope for, we shall at least have made some definite progress toward understanding departmental operations.

Where do we start, and what should we look for?

Clearly, in the time at my disposal, it is not possible to do more than hint at the answers to these questions. The first prerequisite is that the man who is to make the evaluation really understands from experience and observation what good procurement performance really is. One seldom finds a man whose primary interest and experience has been in accounting, or finance, engineering or sales, who is able to measure sympathetically and constructively the stature of a purchasing organization. Nor are all purchasing men qualified for the task, for its successful accomplishment calls for sound administrative judgment, broad vision and common sense, and a proper sense of values; all purchasing men do not have these qualities. A good negotiator is by no means always a good evaluator.

Given the right kind of man, What will he look for? I venture to suggest that he will want reasonably satisfactory answers to the following questions:

1. Starting with the president of the company, What is the scope and responsibility of the department as the president himself understands it? Does he personally assume responsibility for the determination of procurement policy, or is this set by some inner council of executives; and, if so, is the purchasing officer a member of this group?
2. Is the purchasing officer himself possessed of the character, technical qualifications, and administrative ability required for properly handling a progressive purchasing department?

3. Is the organization of the department based on sound principles?
4. Is there a reasonably well-defined procurement policy that is accepted by the president as well as by other top executives, such as sales, production, and engineering, and that is actually followed within the purchasing department itself?
5. Are the procedures reasonably adequate?
6. What sort of a personnel policy does the department have with particular reference to their qualifications, selection, training, promotion, and compensation?
7. In so far as the department is responsible for inventory controls, What are the inventory policies and controls, and are the inventory and purchasing policies properly integrated?
8. What is the record of the department with respect to prices paid and to deliveries?
9. What is the attitude of other departments toward the purchasing department, and what is their feeling concerning its efficiency? Does the purchasing department have the reputation of being capable, alert to its opportunities and responsibilities, and helpful? And in this same connection, How does the purchasing department rate with the company's principal suppliers?

Here, then, are some of the areas for checking which point in the direction of efficiency or its lack. Out of a study of them will gradually evolve a fairly definite picture of the department's performance to one who knows purchasing principles and is familiar with purchasing departments of other companies. True, no mathematical index is compiled, and the judgment becomes an expression of the relative values of a substantial number of both tangibles and intangibles, but the effort will have been worth while.

If my comments this morning seem to you to be unduly optimistic, and if I appear to claim for industrial procurement a degree of accomplishment beyond what you think is reasonable, I only ask you, before passing final judgment, to recall what I said at the outset; namely, I have been talking about trends toward a pattern, perhaps a goal. This emerging pattern is far from being "set" or crystallized. I have attempted to point the direction in which procurement policy, organization, and practice are moving, rather than to draw a picture of where they stand today.

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To those of you who may be called upon to evaluate the purchasing organization of contractors, may I add a word of caution. I have been talking about certain trends in the procurement activities of our more progressive manufacturers. Being trends, it must be evident that they do not in all particulars characterize the average firm; therefore, in making any appraisal reasonable allowance must be made for that fact.

Finally, I have deliberately avoided one question which, falling within the sphere of government activity, I am not called upon to answer-- that is, what should be done by a contracting officer when he has reason to think that an actual or potential supplier does not have as efficient a procurement organization or policy as he should have? Should he insist upon certain changes being made therein? Should he, as a penalty for inefficiency, make an adjustment downward in the profit allowed such a contractor? Should he overlook the fact altogether in the interests of getting needed products, in spite of the probably higher costs?

These questions, fortunately for me this morning, are for you to answer, and I close by tossing them into your lap.

Thank you.

COLONEL JOHNSON: Professor Lewis, on behalf of the Commandant, the faculty, and the student body, I wish to thank you for a very informative lecture.

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