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PRODUCTIVE PURCHASING

*An Approach
to the Systematic Appraisal
of TOTAL VALUE*

GENERAL  **ELECTRIC**

PURCHASING

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Introduction

AMERICAN BUSINESSMEN are big spenders. In the course of a single year, they buy billions of dollars worth of materials, supplies, equipment, and services. The number of purchasing transactions every day is almost beyond comprehension, and fantastic sums of money are involved.

In the electrical industry, for example, electric-utility Purchasing Agents spend an estimated \$5 billion annually on fuel, materials, and equipment. Contractors in the building trades spend upward of \$3.5 billion yearly for electric apparatus. And a single large manufacturer may disburse 50 cents of every sales dollar in purchasing a broad range of goods and services from thousands of suppliers.

Because of its enormous opportunity to reduce the cost of doing business and thus to increase profitability, today's Purchasing function has necessarily become a vital, dynamic activity. General Electric, as a business purchaser spending \$2 billion a year with more than

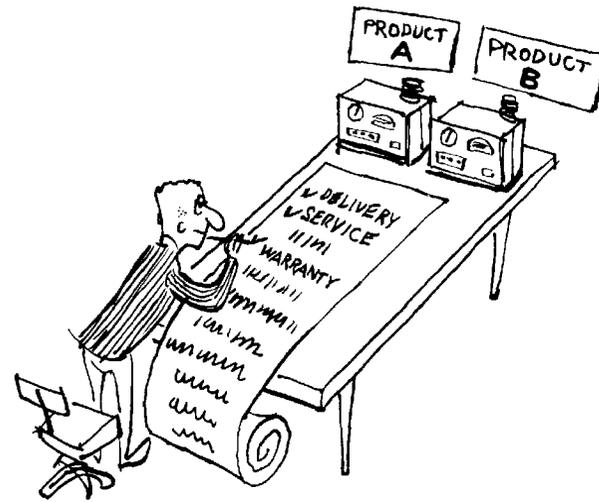
PRODUCTIVE PURCHASING is the descriptive name given this broader use of the scientific method. It is an approach to assessing the added values which suppliers offer with their products. These added values, along with the functional value of the product itself, compose the object of the purchaser's constant search: *total value*.

Most suppliers offer at least a few added values; a few suppliers offer many. Of course, there is more to analyzing added values than determining their quantity. The degree to which each is offered must also be analyzed.

For example, many suppliers have quality-control programs. One supplier's quality control may consist of making a perfunctory check on whether the product "works" as it rolls out the back door; another supplier may be creatively expanding the entire concept of quality control, reaching back from exhaustive end-product testing through rigidly controlled manufacturing processes all the way to the design stages. The latter's total quality control may be so effective that the purchaser is enabled to eliminate his own testing operation.

THE OTHER SIDE OF THE COIN is the degree to which the purchaser *needs* the added values offered. When buying electric motors for inclusion in his own product, a manufacturer's Purchasing Agent might assign a heavier weight to the supplier's assurance of prompt delivery, his value-analysis program, and his nation-wide service shop organization than to his installation assistance, his product-development program, or his system co-ordination capabilities. This same Purchasing Agent, when buying an automated assembly line, might reverse the weights assigned these added values.

Essentially, the Productive Purchaser buys the added values he needs, and he weights these needed values according to the degree that he finds them desirable.



Analyzing Added Values

The technique of analyzing added values proceeds along the same lines of systematic fact-finding as does Value Analysis. The total value of the supplier's product must be stripped down to its component values. The functional value and each of the added values offered must be listed, item by item. They must be examined, weighed, and tagged with a worth to the purchaser.

A CHECKLIST, as with Value Analysis, is useful for appraising added values. Such a checklist follows. Because there are many different values of importance to different businesses, each purchaser may be able to include other added values in the checklist. Also, some of the broader added values might be broken into subordinate values. As the purchaser goes through the checklist, he should keep in mind the long-range best interests of his company, as well as the immediate advantages to be gained.

General Electric offered a comprehensive after-sale service plan. Already in being was a Small Motor Service Station plan which included more than 400 franchised motor-repair shops scattered throughout the country. General Electric offered to broaden these service facilities to include parts, technical data, and instruction on the new motors and a tie-in with the heater manufacturer's distributors and dealers. And General Electric offered to have this service system established and ready for operation before the new heaters with their new motors were released for sale.

The heater manufacturer felt that the service plan offered by General Electric was a plus which would enhance the acceptance of his own product. This consideration played a big part in the decision to give the motor order to General Electric.

CASE HISTORY: *An Electric Co-operative*

A Midwestern electric co-op recently found that new demands would soon exceed its system capability. The co-op quickly planned a series of new substations requiring 18 additional 2500-kva transformers.

A number of suppliers offered to provide the transformers. After analyzing several transformers for value, a few were considered acceptable. When the co-op management then turned to appraising the added values offered by qualified suppliers, they found that one supplier, General Electric, included an added value of considerable importance to the purchaser: delivery was promised in only 10 weeks, instead of the normal 16 weeks required by the other suppliers. Because of the electric co-operative's need for immediate expansion, prompt delivery was weighted heavily in determining the total value desired.

General Electric was given the order largely because of its prompt delivery—in this case made possible by a repetitive manufacturing procedure designed for speeding up transformer production.

CASE HISTORY: *A Steel Company*

One of the larger steel companies not long ago decided to modernize a reversing mill for increased productivity and lower maintenance costs. Offering the greatest possibility for attaining these objectives was replacement of a steam engine with a more efficient electric drive.

Several qualified electrical manufacturers, including General Electric, were asked to submit proposals for building and installing the electric drive system. The steel company carefully reviewed the proposals, considering how each could best fill its needs. Thorough product analysis revealed that several suppliers offered acceptable drives at fairly competitive prices. The steel-company management then turned to an appraisal of the added values offered by each of the suppliers.

The General Electric Company presented a number of useful added values, but the biggest impression was made by General Electric's comprehensive assistance in application, construction and installation engineering. The proposal included designing the installation, supervising erection of the electric equipment, and advising on coordination of the entire project—all directed toward a changeover of drives in an exceptionally short period of time.

HERE WAS AN ADDED VALUE easily measured in dollars. Every hour of production gained by reducing the switch-over time was worth thousands of dollars to the steel company. Largely because of the engineering design and installation service offered, General Electric was given the order to furnish the complete electric equipment for the mill.

After planning the installation, General Electric did the construction drawings, assisted in planning and coordinating the shutdown, supervised erection of the electric equipment, and tested the drive. To save time, the current-converting motor-generator set, control equipment, piping, cable, and conduit were installed and tested *before* the shutdown. The design of the motors made both

double-armature motors accessible for simultaneous installation work. Blowers, coolers, filters, and space heaters were designed into the motor base so that it could be swung into place as a pre-wired unit, ready for connection to the cables already installed.

Result: the mill was back in production two full days before the planned start-up date.



Organizing for Productive Purchasing

The scientific appraisal of product values and added values is a major part of Productive Purchasing, but the program is not complete until Purchasing is organized to take full advantage of the appraisal techniques.

Organizing for Productive Purchasing can be conveniently divided into two areas: (1) integrating the purchasing effort with other functions of the business, and (2) streamlining purchasing procedures to free the Purchasing operation from detail, allowing more time for evaluation and decision-making.

INTEGRATION OF PURCHASING EFFORT with the efforts of other business functions has, in recent years, brought the role of Purchasing to the position of a vital business function. A high level of such teamwork is required for Productive Purchasing. The Purchasing Agent obviously cannot sit at his desk, checking off the product values and added values he needs. Many of these needs can best be determined by people in other areas of the business. Their contributions on a planned basis can make purchasing evaluations meaningful.

Manufacturing is interested in the supplier's delivery performance, his after-sale service, his maintenance assistance. Engineering is concerned with the supplier's quality control, his product-development program, his system co-ordination capabilities. Finance can furnish advice on the supplier's financial stability, his billing policies, his credit arrangements. Marketing is interested in the supplier's market-development program, his selling aids, his product acceptance by industry.

The responsibility for initiating this co-operative effort will rest upon the Purchasing Agent. A good way to start a planned, integrated program is to establish formal channels of communication with the other business functions. The Purchasing Agent might ask Engineering, Marketing, Finance, and Manufacturing to appoint men responsible for liaison with the Purchasing operation. Using this panel of experts for a two-way channel of advice and information, the Purchasing Agent can make his purchasing program truly productive.

TIED CLOSELY to the need for inter-function teamwork is the need for more efficient purchasing procedures. New procedures are needed in order to relieve Purchasing operations from detail, permitting more time for product and supplier evaluation.

Most purchasing organizations are already operating with a great deal of efficiency. The paper flow necessary to purchasing transactions has been streamlined. Still, there is much checking, writing, comparing, and counting which is time-consuming and subject to human error.

Although procedural refinements are being added from time to time, this area has long been ripe for a breakthrough into entirely new concepts. Such a breakthrough has already come about as a result of the development of electronic data processing.

Extensive use of electronic data processing might appear to lie far in the future for most businesses, particularly small ones, because of the high cost of such sophisticated machinery. Certainly the cost could seldom be justified merely for speeding up the work of the Purchasing function alone. However, such machinery could be applied to several business functions, with the cost divided among them.

PURCHASING CAN TAKE THE LEAD by integrating much of its routine work into a total procurement system incorporating the usually separated functions of requisitioning, purchasing, and accounts payable. This has been done by several companies. Notably, one company uses electronic data processing for operating the entire procurement cycle for 30,000 stock items, completing all the necessary work in one computer hour a day. This leaves a great deal of computer time available for other uses.

Electronic data processing can make repetitive management decisions, issue the detailed instructions for carrying out the decisions, and can feed back information on the actual progress of the orders for management control purposes. Such mechanization can streamline the procurement system and permit the Purchasing operation to spend more time doing the complex decision-making which is beyond the capabilities of machines. The possibilities of such mechanized procedures are practically unlimited.

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AS NEWER TECHNIQUES ARE DEVELOPED for application to the problems of purchasing, they can easily be incorporated into the framework of Productive Purchasing. Each refinement and each new development promises to help the Purchasing Agent achieve his ultimate goal—obtaining a full measure of value for every purchasing dollar spent.

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Section 666
Apparatus Sales Division
General Electric Company
Schenectady 5, New York