DEVELOPMENT OF FINANCIAL MANAGEMENT INFORMATION SYSTEMS

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Financial reporting systems in the highway industry have generally been designed and developed to serve custodial accounting needs and to provide information required by statewide systems and the Federal Highway Administration.

Few states have tackled the major job of implementing meaningful financial reporting systems for management action. Departments of transportation, highway commissions, and other government organizations are the most difficult areas in which to develop satisfactory financial management information systems because there does not exist a good overall measure of the efficiency or effectiveness of a government unit. This is why more government organizations have not adopted better financial planning and control techniques. Although profit provides a good overall guideline for the businessman, he uses many other tools to evaluate his internal progress—many of which could be used by government units.

Financial reports prepared for management show the results of management's planning, coordinating, and control efforts. In describing the past, a report attempts to influence the future by motivating people to take necessary or desired actions. Financial reports need not be rigidly structured or precisely scheduled. In fact, many reports should be issued at random intervals when useful information can be presented to decision-makers. No one approach to presenting financial data to management has gained general acceptance; the format of financial reports should be adapted to the particular environment in which the reports are to be used. The principal test of effectiveness of the design of a financial report is its ability to gain the desired responses from the users.

Two recent advances in computer data processing, the planning for large data banks using direct access devices and improvements in data communication facilities, should lead to less rigid structuring of financial reports. Those advances should also give the user greater flexibility in designing the report structure that best meets his information needs. Decentralized computer terminals not only permit an individual access to information stored in computers but also allow him to specify the information required and the format in which the data should be presented.

Despite advances in information analysis and computer technology, many of the fundamental principles guiding the design of financial information systems retain their validity and usefulness. These include an understanding of the principles of communication as applied to financial reporting, the rules to be observed for selecting information to be included in financial reports, and methods for structuring, implementing, and maintaining financial reporting systems.

A report of any type is an attempt to impart knowledge, thoughts, or facts from one person to another with the expectation that it will add to the knowledge, welfare, satisfaction, and capability of the user. In this projection of information and attitudes, the expectation is not only that the user will receive the messages but also that he will take the action dictated. As such the report has a motivational impact. To impart information to the user and to motivate him require that the rules for effective communications be observed.

As applied to financial reports, the more important rules of communications are as follows:

1. Use terminology that is meaningful to the recipient. Accounting is a technical

discipline and, as such, includes terminology that has special significance or emphasis only to an accountant. Because the users will include operating and administrative personnel, technical accounting language should be avoided and language understandable to the user should be used. If data are best understood by the user when presented as graphs or as operating statistics, these formats should be used rather than tabulations.

2. Apply existing knowledge of human behavior traits to improve the report process. How information will be accepted and put into effect is as important as what information is communicated. It is the human reaction to the report that is the link between receiving information and taking action. Consequently, financial reports should motivate the user as well as inform him.

3. Recognize that particular actions originate with people responsible for implementing the action. Usually, information that people consider most interesting and await most eagerly is that which describes activities over which they have authority and responsibility for developing and implementing plans of action. The closest delineation of these areas of interest is the organization chart; therefore, it is useful to organize financial reports in terms of organizational units and to report for each organizational unit the income and expenditure of operations within that span of control.

4. Avoid excessive information, for too much information hides rather than reveals significance. Frequently there are too many conflicting, duplicating, or unnecessary reports full of useless or marginal data and excessive analyses and detail. This frequently leads to superficial perusal of the report and consequently much wasted effort.

5. Emphasize important information and direct attention to meaningful and significant aspects of the report. Exception reporting emphasizes departures from plans or control objectives. This technique compliments the reader because it recognizes that he is too busy to analyze all details of the information presented.

6. Ensure that essential information that highlights basic problems or has a major bearing on planning and control activities is included. Frequently control data requirements cannot be limited to costs or other performance criteria that can be expressed quantitatively or included in the accounting system.

7. Distinguish between information needed for different purposes and do not expect that reports designed to attain one objective will necessarily serve many other requirements.

8. Recognize that planning and control are substantially different functions, and reports developed for control purposes will not necessarily meet the information requirements for planning. Planning is program-oriented, whereas control information is organization-oriented. That is not to say that programs should not be controlled; however, their control is usually the result of controlling resources allocated to an organization to perform the program. Failure to distinguish between these two different types of information requirements usually results in overemphasizing one type of information, de-emphasizing the other, and confusing the reporting structure. It can result in developing the wrong type of information, which is sent to the wrong people who compare it with incorrect measurement criteria.

9. Prepare reports that are accurate, prompt, logical, and clear. In many cases it may be desirable or necessary to include production as well as financial data. Unless information is sufficiently accurate to describe an event or situation, there will be little confidence in financial reports. The information presented should be current; a late report is almost as useless as no report. The scheduling of reports should be influenced by the situation reported. Information that can be used immediately should be reported as the events occur; information that allows for longer periods of effective response can be reported when required. The frequency of reports also depends on the situation encountered. In certain circumstances flash reports can be issued on a random basis as an important event occurs. Other report requirements may be established on a daily, weekly, monthly, quarterly, or annual basis.

10. Consider utility versus cost of preparation. Unless a report's contribution to the company is greater than its associated cost, its preparation need not be encouraged.

It should be remembered that the major interests of management revolve around planning, coordinating, and controlling activities. It is the function of financial reports to provide much of the information needed for these activities. Financial reports, however, are not substitutes for management; they are part of the process by which management is informed and permitted to make decisions and to take action. Information included in financial reports should be carefully chosen with the object of coordinating and integrating the information toward well-chosen objectives. Financial reports should include data on the overall economic environment, key economic factors within the organization, important performance elements that control results, and the definition of planning and control data that are required to ensure results.

The development of information requirements that describe performance and influence operations can be initiated by defining the major functions where planning and control measurement criteria and current information on results are needed. These broad functions are then identified by organizational components where planning and control data are required individually to gain satisfactory results. Major information requirements for planning include overall operating results, financial position, status of major programs and projects, results of research and development efforts, administrative services, and allocation of personnel and material resources. Control information requirements classify these major areas into organizational entities and establish the key performance measures in each one of these areas that best show the effectiveness of performance. These performance measures generally include only those that can be quantified and that have an impact on costs. They are developed by the selective application of all types of measurement techniques.

The sources of information included in financial reports are varied. Most of the financial information flows from the accounting system, which records, classifies, and summarizes financial results based on the chart of accounts and according to accounting rules. Comparative data are usually taken from accounting records of previous periods or are computed by multiplying measurement criteria representing the rate of incurrence of an expense, if efficiently performed, by the level of activity. These data are compared with actual results of operations. Additional information in financial reports may include departmental statistics, personnel information, research and development results, labor productivity, inventory levels, political consideration, and economic trends and conditions.

The structure of financial reports includes formal design, techniques used in presenting information, level of detail reported, and methods used to integrate, highlight, and report by responsibility centers. The development of a financial reporting structure is a complex undertaking because it must respond to many different requirements, starting with the general considerations outlined here. The designer of financial reports must also recognize the different amounts of detailed information needed by the several organizational levels. Information included in financial reports must flow from one reporting level to the next in an integrated manner so that the information communicated is consistent, thereby permitting each level of management to communicate with the other. The reports should be designed to recognize where decision-making authority exists so that the individual responsible for an activity is informed of the results of actions taken.

Usually the commission is interested in broad policy and planning problems and overall financial results because its function is to guide, plan, evaluate, and approve major plans and decisions of other executives. Subordinate managers emphasize the development of major planning strategies, but they are also vitally concerned with control data to ensure the attainment of their objectives. Department managers participate in the planning process, but their major thrust is in the controls area to ensure that their operations are being performed as efficiently as possible within the approved scope of operations and established programs.

Once the broad areas of information requirements are established by organizational hierarchy, it should be recognized that descending levels of authority require more intimate knowledge of operations than do the summarized results reported to higher authority. In summarizing results, however, it is essential that the information flow be integrated.

When financial reports are designed, the characteristics of the organization and the attitudes and information needs of the users should be recognized to the greatest extent possible. Executive management usually requires, as a minimum, a monthly financial report on operations. Although the format and content of monthly financial reports vary considerably, the reports usually include a highlights statement, a comparative balance sheet, and reports of operations summarized, if appropriate, on an organization, division, and department basis. The highlights statement should be supplemented by comprehensive reports on program accomplishments or problem areas where information of this nature is significant. It may not be necessary to report on each program every month. The emphasis in the report can be shifted from month to month to different functions, and program results should be compared with the assumptions and expectations on which each program was based. Graphs should be used to reveal current trends as well as projected results.

The report of operations presents a comprehensive overview of operations on an organization-wide basis. It accomplishes three basic functions. First, it illustrates by major divisions or operating entities (a) the magnitude of the changes in planning premises of plans originally approved prior to the beginning of the fiscal year and (b) the current view of what results will be for the current year. This information is useful because some opportunities for adjusting or modifying plans and programs generally exist. Second, it reveals the efficiency of executive and supervisory personnel by showing the performance of their units. Third, it compares the overall actual results of operations with the prior year and reveals planning and control variances by major areas of operations.

All of the efforts devoted to the design of a financial reporting system will be wasted unless the system is implemented properly. This requires patience, understanding, and ability to communicate the objectives of an information system. An information system is not a substitute for management: It cannot act; it cannot make decisions; and it cannot evaluate people. It is merely a process by which data are collected, classified, analyzed, compared, and presented so as to give meaningful information to the user.

After the rules of communication have been observed, the information needs satisfied, and the financial reports designed, the financial reporting system must be explained in detail to each user. Where the financial reporting system is an integrated one, the entire system is as weak as the weakest person in the chain of communications. Each communicator must talk about the same information content in the reports. Detailed information must generally be solicited from subordinate levels, and explanations of variances from plans or control objectives must be obtained from the point at which actions occurred or where the plans were made. For explanations to be meaningful and useful, the subordinate management must have a clear understanding of the meaning and significance of variances and of the strengths and weaknesses of the measurement criteria used to establish the variances and confidence in the integrity of the measures used. It must also have understanding of and confidence in the accounting system used to develop the financial reports.

The designer of the financial reporting system must realize that the preparation of reports is not the objective of the system. The objective is to motivate people to take certain actions. He must be able to overcome the instinctive reactions of people against being reported on and establish the financial reporting system as the instrument of the user rather than a device of the financial organization. For the financial report to be useful, the user must feel that the measurement criteria are fair and reasonably accurate and that conclusions resulting therefrom are logical. He must also see a direct benefit in the use of such information in terms of understanding his problems, reaching better decisions, managing people more effectively, and, in general, making better use of the company resources entrusted to him.

To accomplish this, all management levels reported on should participate in the design of the financial reporting format; they should express their preferences for how data are presented and should share in the development of the measurement criteria associated with their activities. This will lead to improved understanding and use of financial reports.

With the developing sophistication in problem analysis and problem-solving techniques, the demand for financial information will in all likelihood continue to increase. Under such circumstances it is relatively easy over a period of time to increase the number of financial reports issued, many of which may serve only a current need or provide little or no useful information. Therefore, before new reports are issued, their potential usefulness should be carefully reviewed by each proposed user to ascertain if the report is worthwhile. This review frequently can best be made by representatives of executive management and the financial and data processing departments. The proponent of a new report should be required to justify its preparation.

Periodically it is advisable to review existing reports to determine whether they are serving a useful purpose. Each user of the reports should be asked the following questions:

1. Is the report very useful, fairly useful, or not useful?
2. Why have you classified the report in this manner?
3. How is the report used?
4. What actions does the report prompt you to take?
5. Is the report timely, accurate, and informative?
6. Should the report format, frequency, or content be changed?
7. Are measurement criteria sufficiently accurate?
8. Are improved measurement criteria available but not used?

Answers to these questions help determine whether the financial reporting system is changing sufficiently to meet management needs for financial information without becoming too burdensome.

The development and installation of a financial management information system is an art, not a science. When such systems are properly conceived, approved by management, and effectively implemented, they can be extremely helpful in increasing the effective use of resources through better planning and control.

Although control is important and has in many cases been the motivation for the implementation of such systems, I believe the opportunities presented to improve planning and to broaden the manager's perspective in terms of his responsibilities for financial planning and control are far more important.