

## From Our Readers

### *An Opinion . . .*

#### **"MANAGING INFORMATION FOR PROFIT"**

##### *Editor's Note:*

*The following is a modification of a speech presented 13 April 1978, to THE CONFERENCE BOARD, "Top Management Priorities for Management Information Systems."*

Although the subject referred to in my title is of great concern to both the Information Executive and to those Senior Executives above them, I am addressing my remarks primarily to those senior executives who represent the very top management of corporations. I do so because it is primarily these persons who have the power to set the tone, as well as the direction of the information function's activity.

I contend, and I do so very strongly, that top management generally gets what it deserves from its information function.

Let me start with some definitions which would distinguish between data processing and management information systems. My definitions are not at all intended to be exhaustive, but they are among many that I have heard and read and are generally workable.

A management information system is a system which provides all levels of management with the information necessary to discharge their responsibility effectively. It provides timely, selective, and readily-understood information which is oriented to management's needs and enables management to better perform its functions: "planning, organizing, negotiating, deciding, controlling, reporting, and predicting." Note that I am talking about information, not data. Data are raw facts and figures, records of detailed transactions, specific events, etc. Information, on the other hand, consists of properly selected data transformed into a structured and organized format which can be effectively used for a specific problem at a specific time by specific individuals. Further, information consists not only of selected data on what has happened, but also conversions of these data into projections or forecasts of what will, or can, happen.

When I interviewed Mr. William Spencer of Citibank last year for the **MIS Quarterly**, he emphatically distinguished between data and information. He used the analogy of mining tons of pitchblende to get a few grams of radium. As President of Citibank, he was only interested in radium, or information. Data is not information, and I will hereafter be referring to the management of information, not data processing.

Enough of introductions and definitions. Let's examine why I say top managers usually get what they deserve from their information services function. In a recent book edited and written by Professor Ephraim R. McLean of UCLA, and John Soden of McKinsey & Co., *Strategic Planning for MIS*, they emphatically state, "Top management has the sole responsibility for defining an MIS strategy statement. It must answer, at a minimum, five critical interrelated questions:

1. What are the objectives for the MIS effort in the enterprise?
2. By what strategy will we seek to achieve these objectives?
3. How are we going to organize the MIS effort to carry out these objectives?
4. How are we going to decide how much to spend on MIS?
5. How are we going to decide how to allocate scarce MIS resources to various projects and services?"

They continue, "The precise resolution of these issues regarding objectives, strategies, and the three major policy concerns — organization, budgeting, and allocation of resources — is basic to the success of the MIS effort in every organization."

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I believe that the similarity between this strategic statement as it relates to the information function differs very little, if at all, from that of other major functions of a complex organization. Jack Shaw of Touche, Ross, & Co., authored a book in 1971 with Bill Adkins and Arnold Dietrie entitled *Managing the EDP Function*. They were early spokesmen for the point of view that the data processing/MIS function is a business in miniature and one which can be managed as can any other technical function. They specifically compared as an appropriate precedent and parallel, the engineering function when they indicated, "There was a time when the engineering function was considered too technical to be managed effectively. As the expanded economy made effective management mandatory, management skills were introduced into the engineering process itself. Procedures for communicating, budgeting, progress-reporting, and results-monitoring were introduced." The same is true in the information function today, and has been for some time. They say, and I agree, that accordingly, any contention that the information services activity is unique, not manageable, *etc.* . . . is not acceptable.

When we assist clients in structuring a search for a company lead information executive, the first question we ask of our client's top management concerns the scope or charter of the position. While it is unrealistic to expect the CEO of a major corporation to be personally, heavily involved in the information function itself, someone must give direction or determine the scope and charter of this function, and this direction must come from the highest management levels of the corporation. Generally, in most searches in which we are engaged, we are given such a charter, which I often suspect is developed more by personnel executives, who have copied them from other companies, rather than by the senior executives to whom the information function reports.

The next question, however, in structuring a search, we consider to be even more significant, *i.e.*, what are the criteria by which the newly-hired information executive will be evaluated? This input is critical although seldom discussed with a candidate or new incumbent, and much less determined and laid out in advance. Whereas the charter provides the direction, the criteria for evaluating this individual is the feedback to management which is necessary for them to measure the effectiveness of an individual, once in the position itself. It is generally in the absence of setting such criteria that top management most often abdicates its responsibility.

About two years ago I conducted a survey of the heads of the information functions of 91 of the largest corporations in the United States. These people were the heads of whatever the information function was called — let's call it the information services function. They are generally considered to be among the leaders of their profession. The format in which this survey was conducted was essentially that of informal and very loosely-led discussions at a series of dinners with six or seven information executives and myself coming to exchange ideas, concerns, and experiences that relate to managerial, rather than technological, issues. The only structuring of these discussions was a few questions that I had asked at the beginning of each of these dinners about their professional concerns and how The Society for Management Information Systems could assist them. Accordingly, they let their hair down, so to speak, and candor ruled.

The number one concern shared by virtually every attendee at these dinners — the one subject, or one issue which might cause an information executive to wake up in the middle of the night in a cold sweat — was how was he being measured, and how could he enhance the perception and reception of his activity by his bosses and users.

These information executives indicated that they are probably evaluated most on "customer Satisfaction." Essentially, then, if the "bitch factor" is relatively low, the senior executives to whom the information executives report consider them to be doing a generally satisfactory job, but their positions become jeopardized as the same factor increases. In my opinion, this is not unreasonable as one criteria, but it is hardly enough. It must also be considered that the "bitch factor" could be in response to an entirely different set of stimuli.

Dick Nolan, when at Harvard, published one of the most insightful articles I have ever read, entitled, "The Plight of the EDP Manager," in the May-June 1973 issue of the *Harvard Business Review*. Although I don't feel it is appropriate to go into elaborate detail on the article, he performed an invaluable service by spotlighting how the head of the information function is as much, and maybe even more, a manager who

orchestrates change, particularly organizational change, rather than being merely a manager of technology.

In the same survey that I just mentioned, almost all of the information managers referred to had read this article and were disturbed by Nolan's observations, but were not sure how to cope with the resultant problems. As Nolan put it, orchestrating, managing, and impacting the organizational changes within a complex enterprise can be not only unsettling, but viewed as threatening to the investments in experience, education, and status, as well as career opportunities of many, particularly of the managers who are being impacted upon. Since the final implications of such organizational changes are seldom understood at the outset, if at all, such changes will understandably bring about attacks on new technologies or their recognized spokesmen. Accordingly, it would not at all be unreasonable from the point of view of the managers who perceive themselves as threatened by new concepts, to counterattack with every weapon in their possession.

Peter Drucker commented that rapid change is a reality of our times, and that it will at least continue at the current pace, if not accelerate. Accordingly, he suggests that the issue becomes one of understanding the increase in the rate of change and the meaning of the concept of change, as well as developing ways to manage it. Drucker further comments that most or all of the assumptions upon which management practice has been built for the last fifty years are now obsolete, and that a whole new set of assumptions of the nature of people, work, and the work environment, must be created. From these new assumptions, innovative management practices will be derived. Although being at the forefront of bringing about or spearheading such changes can be exciting, the mortality rate of point-men is notoriously high.

Top management's greater awareness of and consideration of the role of information executives as change agents, and of the processes referred to by Drucker, would facilitate and soften the impact of such change, but it does require top management direction, as well as support. One method of assuring that there is proper direction and a proper, ongoing feedback mechanism to evaluate the effectiveness of the information services activity is to have an information management or resource committee with executives above the information executive, and possibly major users, as active participants on this committee.

It is critical that this senior management committee resolve priorities, budget matters, and allocation of resources, among other things; less involvement than this is, again, an abdication of top management's responsibilities. If a company has a successful and productive information function, there are bound to be more calls upon it than they will have resources to provide. It is not, and should not be, the function of the lead information executive to tell the president of a division, or very senior executive, that in his wisdom, he believes that there are other more significant priorities which must be met before he can serve their particular requests. This is a shortcut to unemployment. The information committee, on the other hand, should do this. In this way, there will also be an assurance that information is treated as a corporate resource.

A specific example of an apparent lack of understanding of what the effectiveness of the information function involves, is the question we are asked increasingly by chief financial executives concerning how much money a company should spend as a percentage of its sales in the information function. It seems that at one time some consultants, apparently looking for a mechanistic formula that they could peddle, rather than helping clients develop insight, came up with figures which might have said that in a certain industry we should spend approximately one percent of our sales, and varying other percentages in other industries. I have to suggest that this is nonsense. It is the wrong question to ask. The first determination should be, "for what is the information going to be used?" Is it going to be a data processing operation, which is primarily to handle transactional matters, or is information going to be developed and provided so that top management can ask the "what if" questions, make predictions, etc.? When a company decides what it really wants the information function to do, the next step should be to evaluate what stage they are in in the development of their own information function. Possibly the definitive work on evaluation of the various stages of the EDP/MIS function has been done by Dick Nolan, the original non-technical article having appeared in the January-February 1974 *Harvard Business Review*, entitled, "Managing the Four Stages of the EDP Process." At any rate, the stage

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evaluation generally can best be provided by outside, objective consultants. There are a number of outstanding consulting firms that have done this and do it exceedingly well.

I previously referred to information as a corporate resource. I believe that information can be most productive and provide the greatest benefit to management when it is an integral part of the planning process, where it feeds the top control and planning activities, which in turn facilitate the total planning process. Planning is generally a three-tiered pyramid, with the bottom, largest base relating to operations control, where MIS is heavily involved in transactions processing and control. Above that, with a smaller, narrower base, is the management-control planning, where information is involved to a greater extent in the planning and control of resources, including people, money, and materials. And then, at the very top level, or the apex of the corporate planning process, is the strategic planning, where the information function is seldom utilized.

In the future, I perceive and believe there will have to be a greater melding together of the planning and information management functions and a separation of the information processing from the work/data processing. Some companies contend that their information management problems stem from the fact that their information function management is made up of computer technicians, primarily interested in bits and bytes, speeds and feeds, the elegance of various software packages, etc.

First, I seriously question whether there are that many computer technicians still managing the totality of major corporation information services functions. If there are, where have the senior executives to whom this department reports been? Why do these senior executives still have people like this in such responsible positions? Also, how long have these technicians been in these positions without being noticed for what they are? These are all abdications of management's responsibilities. Much has been written and discussed about this, and there has been such general acceptance of the idea that the head of the information function needs to be a businessman, rather than a technician, that there is no legitimate reason for not having such an information executive. This is particularly true because it is relatively easy to assess which type of individual is heading an information function.

In addition, for the information function to be a greater contributor to the profitability of a company, it should be able to attract business-oriented, potential top executives with broad perspectives rather than primarily technicians. To do so, there must be clearly-perceived career path alternatives other than those within the information function itself. One of the other questions we ask in structuring our search concerns the career path alternatives for management personnel within the information function. We usually get substantial homilies about the opportunities for advancement into virtually any and all areas of general management, upon demonstration of capability. When we then ask to look at an organization chart to identify where previous management personnel from the information services area have moved, we generally get a somewhat embarrassed silence. To be able to attract the right kinds of people and keep them within the corporation, they must have such opportunities.

Ten years ago the more entrepreneurial, ambitious professionals in the information services area had opportunities outside their companies to obtain venture, capital money to start their own firms; in many cases, I might add, without any qualifications for doing so. Those days are now long-gone, and will, in all likelihood, not return in the foreseeable future. The same types of people who are competitive, ambitious, risk-takers who want to run their own show, *i.e.*, who seek opportunities in general management, look at their prospects based on the historical advancement opportunities for MIS directors, and decide that that's not the area or the function that they want to go into. Bright, capable, ambitious, young people are not particularly attracted to seemingly dead-end positions or departments.

A number of years ago we started advocating a "pass through" approach to hiring management scientist professionals. We suggest that one-half of all entry level professionals be hired with the explicit intention of keeping them in the OR/MS function only 2-5 years, after which they would be expected to move into the functional areas they had been serving. Accordingly, knowing that advancement meant moving into such functional or other staff capacities, many became much more dedicated to the business, less to preoccupation with technology. This also meant that more and more upwardly mobile individuals were attracted to the department and began to permeate the entire corporation, bringing with them an awareness and appreciation of management science technology. I strongly urge that this same "pass through"

approach be utilized with information systems professionals. These "pass throughs" then could also become more attractive candidates eventually for senior manager positions in information management.

A number of years ago, on the basis of several search assignments, I started talking about the "new breed" information director. Promotional material we sent throughout the profession described the positions as follows:

"Our clients are diversified, multi-industry manufacturing companies with progressive managements. The 'new breed' of manager referred to understands and has demonstrated capabilities, not merely as it relates to the efficiency of the MIS function, but even more importantly as to its effectiveness. This person should understand that as manager of MIS, he or she is not managing technology as much as managing change. This includes bringing about and implementing change of the managerial decision process as it relates to running a business. This person will also be expected to be at least 'snow-proof', *vis-a-vis* EDP technology, himself, and make sure that the *staff* is abreast of hardware and software state-of-the-art. Accordingly, he must have the perception of a general manager, and not only *sell* EDP, but must develop and sell the logic and discipline of how one does business in a particular environment. He must be able to develop the perception of the other top executives of the value of the systems function and the requirements for implementation."

I started describing this new breed of information manager as though his time had really come. The same Dick Nolan I referred to previously, took up this same theme and in the March/April 1976 *Harvard Business Review* and wrote an article entitled, "Business Needs A New Breed of EDP Manager."

What I didn't realize is that I had not merely jumped to a conclusion based on a statistically insignificant sample of a handful of companies, but that I was inadvertently being conned by some of these company presidents. They said, but didn't really mean, that they wanted this "new breed."

An example would be that one of my clients, in a final selection process, came down to two candidates. One was 37, ambitious, dynamic, and had all the attributes sought in the so-called "new-breed" information executive. In his final interview with the president he indicated that he expected to be in this position for a maximum of three years, and that by the end of those three years he would have either brought about the changes necessary to make the information function really meet the demands and needs of top management, or he should be fired! If the former were the case, however, he would expect to be promoted and moved into a general management capacity of a line nature, or he would quit. The other candidate, about 12 years his senior, was not nearly as aggressive nor as ambitious, was a first-rate data processing/information executive, and had no ambitions to move beyond this capacity. The latter candidate was hired! I have seen this same scenario repeated several times.

I am convinced that the day will come, and is almost here, when this "new breed" will be recognized as indispensable to top management if the information function is ever to be run profitably. I am also convinced there will be, and must be, a greater integration of information management and the planning processes. However, if I am able to stress only one thought, one message, it is that to really enhance the information function, top management must be involved.

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