

The Expert's Opinion

John Callahan is the Director of Information Resources Management for Hershey Foods Corporation. In that role, he is the senior corporate official responsible for the information systems activities throughout the corporation. His principle charter is to establish corporate-wide information systems plans that support the corporation's strategic business plans and objectives. Specifically he is responsible for both identification and implementation of information systems for executive management and corporate staff departments, and corporate-wide technology planning and coordination. In addition, his group also serves as a resource for the operating divisions on specialized projects and in areas such as information systems planning and emerging technologies.

Hershey Foods Corporation, based in Hershey, PA, is a \$1.7 billion organization engaged worldwide in the manufacturing, distribution, and selling of consumer food products such as chocolate and confectionery products and pasta.

Interview by Mehdi Khosrowpour

IRMJ: How do you make top executives aware of the importance of information resources?

Callahan: That is a challenge that is almost never ending. One approach that has been successful for us is an annual information systems conference that we have held the last five years. Our objective is to bring together our senior MIS practitioners, managers, and senior management from both corporate and the divisions and expose them to outside experts of some repute who speak on the benefits to be gained from the application of information technology to our particular lines of business.

IRMJ: What is the role of information resources in the overall growth and success of an organization?

Callahan: It's fairly clear that there is a role to be played in terms of the traditional support services that are needed. This would include the

classic applications of accounting, finance, the processing of orders, managing of inventories, etc. However, what we see developing is that information resources is becoming increasingly important in all aspects of our business. Before, we had to focus primarily on our competitors and their activities. Now, we have to be equally sensitive and, in some incidences, more sensitive to what our customers are expecting of us and to the opportunities available in dealing with our suppliers. The challenge is to identify these opportunities, establish a consensus that the information systems opportunities are worth pursuing versus other opportunities outside the information systems area such as advertising and promotions or R&D, and then execute them effectively.

IRMJ: What do you consider to be some of the major problems in management of information resources in organizations?

Callahan: I can think of three areas that present the biggest challenge. First, I think there is a need for more of an external focus by the information resources discipline. I think the tendency is to focus primarily on the technological aspects of our responsibilities. Yet, as we test what's expected of us, we find that increasingly there is a critical link to satisfy our customer, both from our management's viewpoint and from our customer's viewpoint. To do that we have to be more conversant with the needs of the customer. If you don't make a conscious effort to do that in concert with the functional areas, such as sales, marketing, distribution, who are directly responsible for being sensitive to our customer's needs, then information resources

won't be as effective as it must be.

A second item is closer linkage with the strategic planning process. I think we find most members of management in agreement that it's becoming increasingly important to consider information technology as we lay out our plans and strategies. However, there's still not a natural inclination to include information resources as an active participant in the overall business planning process.

The third problem has to do with more of a routine interaction and involvement with management in the formulation of the more tactically oriented plans. We find today that there are opportunities that arise, that are not foreseen when we developed our longer range plans and strategies. In many instances, the ability to effectively address these opportunities from a systems standpoint is critical to their being a success. Our acquisitions of Nabisco Brands in Canada and Peter Paul Cadbury here in the states are good examples of this type of situation. Without being routinely involved in the near term tactical planning process, the ability to successfully address these types of situations is jeopardized.

IRMJ: Do you consider information resources as important as other major corporate resources, such as material, financial, human, or management resources?

Callahan: The answer to that is clearly yes and I don't think you would find too many people who would dispute that position. However, the difficulty is getting your arms around it. Human resources are fairly easy to quantify in that you establish a specific position or department to perform a specific function. With physical plant resources, if you need more production capacity you have to acquire additional bricks and mortar. If you want to expand your sales network, then you need additional sales representatives.

In my view, there is a need to look at the application of information technology and information resources in a similar manner. This is extremely difficult to do if information resources is not an active participant in the strategic and tactical planning effort of an organization. It makes it very difficult to determine if information resources' agenda is properly aligned with organization's overall mission and current objectives.

IRMJ: What is your assessment of end-user computing? Also, how do you think this particular need can be satisfied and managed effectively?

Callahan: I think end-user computing has been one of the most successful vehicles for demonstrating the benefits that can be derived from the appropriate application of information technology. Personal computers particularly have been very successful in demonstrating how we can consider more opportunities by extending people's effectiveness. As a result, personal computers have been very valuable in demonstrating the value of information resources to senior management in a tangible way.

In terms of managing this area, it is quite a challenge. The difficulty is to determine how much is enough and which direction to take. The number of available options is significant and continues to grow. Like everything else, life is full of choices and not everyone is always in full agreement with the ones chosen. Hopefully, we've made more right than wrong decisions in this area.

IRMJ: What is your assessment of technological developments of the past two decades in this field?

Callahan: I think they've been substantial and will continue to be. In fact, at times the number of alternatives seems almost overwhelming.

The technology growth in the more traditional mainframe computing environment is probably proceeding on a bit more of an evolutionary path, one that's not without its challenges but more manageable. Some of the other areas, such as personal computing, local area networks, voice-mailing and imaging, are proceeding at a more rapid pace and in some instances it is not easy to discern which ones you should focus on. One that we are monitoring, but we've still not seen a great deal of tangible results from, is Expert Systems. It has a lot of appeal but it is still not clear if the reality will be equal to the promise.

IRMJ: How do you manage the constant need to educate both end user and executives from other functional areas who don't have a good understanding of the possibilities of this technology?

Callahan: In addition to our information systems conference, we use a variety of training programs that we've established in concert with our Human Resources Planning, Training, and Development departments. In addition, training is viewed as an essential element that must be addressed in the information systems plans developed by all of our divisions.

IRMJ: How do you measure effectiveness of information management?

Callahan: We do it through a variety of techniques. Those projects that have a clear cut objective to either reduce cost or increase the asset are fairly straightforward. In the other areas that are not quite as concrete, we either try to quantify the results or utilize surveys of our internal client's perceptions of information management's effectiveness. Either way, it is an inexact science where there is always room for further improvement.

IRMJ: What are the challenges of integrating traditional information system processing, office automation, and telecommunications that traditionally were separate from each other?

Callahan: I feel we have had a reasonable degree of success in integrating these different components because we haven't had too much in the way of intramural differences over who is responsible for each area. Right from the start, as office automation began to emerge, we recognized that it was going to move in a direction of becoming linked with the information systems area. I guess the key is to recognize that fact in the early stages and to break down any organizational barriers that begin to emerge.

IRMJ: What do you find to be the challenges or problems of dealing with managing human resources in a typical information system environment?

Callahan: One of the challenges is that there is a tendency to have more of an allegiance to the discipline than there is to the business. The challenge is to not compromise people's personal or professional growth objectives, but to constantly remind them that it is the success of the underlying business that is the foundation for everything we do and that provides the opportunity for professional growth.

IRMJ: What is your assessment of expert systems in general and what do you anticipate to be the future of this technology?

Callahan: I think that originally expert systems promised a lot more than was delivered. It was probably a phase the technology had to go through where the academicians, researchers, and scientists were involved. Our research indicates there were very few really successful applications of the original artificial intelligence concept.

Now the whole field has moved into a much more realistic phase and people are starting to find tangible applications, such as the processing of credit applications for banks. I believe that as more successful pragmatic applications of expert systems become known, the use of this technology will become more prevalent. However, I doubt we will see a great deal of successful commercial applications of the original artificial intelligence concept, which set out to provide the same type of intuitive reasoning that the human mind can supply.

IRMJ: What is your assessment of the challenges of dealing with security and control of information resources in corporations?

Callahan: That is probably one of the most frightening issues with the advent of hackers and viruses. One of my associates says that locks only keep the good guys out. Though that statement doesn't produce a great deal of comfort, we continue to consider security as an increasingly important aspect of everything we do in the information area. We try to be aware of security right from the beginning of every project and, in that manner, build in adequate security for each application.

IRMJ: What is your assessment of information resources management education, the level of training and preparation of students coming out of college in programs dealing with information systems, information resources, and information technology?

Callahan: Most of the people we hire tend to come to us with experience beyond just their academic training. Therefore, I'm not sure I'm in a position to give you a totally valid assessment. Based on the performance of the people on our staff, I believe the quality of the training being offered by colleges is generally good. The academic community has long recognized that people with information resources training are

going to be increasingly in demand and they've looked for opportunities, through internship programs and other dialogues with industry, to try to build programs that will support a real world environment.

IRMJ: What do you see as future trends and issues in information technology management facing corporations?

Callahan: As we discussed earlier, it goes back to trying to find the optimum mix of information technology that should be applied to help the corporation meet its objectives without compromising the other more traditional areas, such as sales, marketing, advertising, and promotions, etc., that are a bit more quantifiable and familiar. It's a bit like the research and development function. You know there's a certain amount of R&D expenditures that will not bear fruit, but that doesn't mean you should ignore R&D. Even with all the emphasis on controlling overhead expenditures, most corporations are still experiencing a fairly significant and a regular rise in their information systems expenditures. So, the challenge will be to continually make certain that the returns on those investments are being properly viewed from a business perspective.

IRMJ: In your position do you find the technology aspect of this technology to be more manageable than human aspects or business aspects?

Callahan: Some of the technological aspects, typically those that have been around longer where we have more experience are more manageable. Some of the newer technologies are more difficult to manage. They are presented in a very positive fashion and hold a certain amount of appeal. However, as you start to implement them on any kind of a significant basis, all of the untested or unknown aspects rise to the surface and you have to wrestle with them. The implementation of new technologies continues to be a

challenge and you have to be judicious as to how many of these efforts you undertake at any given time.

The challenges of the business side are pretty much the same as they've always been. It is a question of demonstrating to your peers and management that there is enough benefit to be gained from the application of a major commitment of resources to win their support. That challenge is the one that has always been the more difficult and the one that you have to make certain you focus enough attention on because otherwise the importance of information resources to the business will be lost.

IRMJ: What would be your advice to your colleagues in this field to help them prepare or deal with challenges of this field over the next decade?

Callahan: First and foremost, make sure you understand the mission of your organization. If you address every issue strictly with an information technology viewpoint, you may have some initial success but you will eventually be viewed as an advocate of technology just for technology's sake. After understanding the mission of your organization, seek out those oppor-

tunities that will produce the biggest return and make certain that what you are proposing has a reasonable high probability of success. If you are too conservative and the success is assured, you're probably not doing something of enough consequence to really demonstrate the value of information resources. If you propose something that is very risky and fail, it will create a negative perception of the value of information resources. The key is to strike a proper balance that is in tune with an organization's culture and risk/reward profile.

Finally, I would recommend focusing on the points I mentioned earlier. Be sure to focus an appropriate amount of attention on the organization's external environment to be sure you are addressing areas that are important to the organization's overall mission. Then, try to be an active participant in both the strategic and tactical planning of the organization. If an appropriate amount of effort is spent on understanding the external environment, then information resources should be able to help identify opportunities for applying information technology that should be pursued; and do it with the knowledge and confidence needed to convince managers from other functions of the value of those opportunities. ▣

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