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# Factors Influencing the Success of the EIS Implementation

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**Abstract.** The Executive Information Systems (EIS) informs the executive about the state of his/her organization through the development of sophisticated formats. This paper will discuss the factors that influence the success of EIS implementation based on literature that deals with the implementation of any information system. Similarities and differences between EIS and other information systems is investigated. The aim of the paper is to describe the essential elements required to successfully implement the EIS. There are four factors which are shown to be important for EIS users to consider: problems encountered while building the system, the resources of the organization, the structure of the implementation, and the features designed into the system itself. Based on these factors, the degree of implementation success is characterized as an unsuccessful implementation, an opportunity for a successful implementation, a desire for a successful implementation, or a successful implementation.

## Introduction

The Executive Information System (EIS) has been discussed by a number of authors [1], [2], [3]. A common definition of an EIS is a sophisticated system that enables the executive to monitor the state of an organization and any changes that may have occurred in the past that may be used for making decisions. Fireworker and Zirkel [3] define an EIS as a set of tools that are designed to help an organization to carefully monitor its current status, its progress toward achieving goals, and the relationship between its mental model of the world and the available clues about what is happening within the organization in real time. Watson *et al.* [4] define the EIS as a computerized system that provides executives with easy access to both internal and external information that is relevant to their critical success factors. Similar definition is provided by Leidner and Elam [5], who look at the EIS as a computer-based information system designed to provide senior managers access to information relevant to their management activities.

There are many characteristics that distinguish an EIS from simple data retrieval systems. According to Housdshel and Watson [6] an EIS is used directly by top

management. It provides online access to current information about the state of an organization, and is designed to meet management's critical success factors. This means that top managers are intimately involved in developing the system to satisfy their unique requirements.What is more, an EIS uses state-of-the-art hardware such as graphics, communications, and data storage and retrieval methods. The complexity of an EIS is determined more by capital constraints than technology. For example, they can be extremely sophisticated, commanding multiple data bases with automated intelligence, or serve as simple monitors of a limited number of variables.

**Popular names of the system**

Different authors use different terms to identify similar systems. For example, Rockart and Delong [1] use Executive Support System (ESS), whereas Paller and Laska [2] use Executive Information System (EIS). A third label is the Executive Information Facility (EIF) used by Fried [7]. Irrespective of what name or label is selected to identify the system, the system itself remains unchanged.

The term executive information system (EIS) has been selected for this paper since it is recognized by many readers, and seems to most accurately reflect the major function of such sytems, which is tracking information. Therefore, EIS and ESS are not differentiated here, even though some authors, like [8], distinguished between them. Turban [8] contends that an ESS has more features than an EIS. Where an EIS may enable the user to access management reports and update information, the ESS can include such features as inter-office communications, office automation, analysis support, and intelligence. Even so, defining a system on the basis of its features is not consistent within the literature. Different authors use different labels when referring to similar system [9].Therefore, EIS is used throughout this text.

**EIS versus other IS implementation**

Kwon and Zmud [10] identified four research streams: A factor research stream, a mutual understanding research stream, a process research stream, and a political research stream. But Lucas *et al.* [11] limits the research stream in the implementation field to two major streams: process and factor research. Process research deals with relationships among designers and users and on how they approach the design problem. On the other hand, factor research asks for various factors that influence the success of implementation. This paper will concentrate on the second research stream which identifies factors that influence the success of implementation.

The implementation of such an IS may differ, depending on the type of system being implemented [11]. Different users will use different systems. Barrow [12] believes that an EIS differs from other information systems, and this may require a different approach to planning and implementing an EIS. However, there are some similarities that may encourage users to follow the same steps as are used in implementing any IS, while implementing their specific EIS.

Turban [8] introduces EIS as part of the DSS field. Both systems are designed to support management. However, the systems are different in terms of their functions. EIS can be considered to be a DSS for executives. The user is the major factor which differentiates EIS from DSS. In EIS an executive will be the user, while in DSS mostly middle management is the user. Furthermore, different functions are performed by different systems. An example of this is that EIS is used mostly in communications, while DSS is not.

Based on the literature (see Table 1), factors which influence the success of implementation of any IS, such as Transaction Processing Systems (TPS), Management Information System (MIS), End-User Computing (EUC), DSS and EIS, have some similarities and differences. Management support and commitment is a critical factor that influences the success of implementing any system. Without support from management, implementation will have a very low probability of being successful. Technical factors also pay a major role in determining the success of implementation of any system. The cost is a significant factor that may enable or prevent firms to and from using such a system. However, the cost of EIS is much higher than DSS or other information systems. Another difference between EIS and other systems is the higher level of management, but usually not less than the executive level, which must support the use of the system. What is more, since system costs are high, the benefits of an EIS must be determined and assessed in order to implement it. On the other hand, other information systems, such as DSS, may be used by lower level management, as on the department level of a firm.

Barrow [12] identified some of the differences between EIS and other IS. Users of the EIS are not usually computer literate, and do not have time for extensive training, if needed. Another difference is that EIS is more dynamic than the traditional IS. Flexibility is very important here because the needs of the users change constantly within a firm. Nevertheless, different information systems require similar factors in order to be successfully implemented.

Most studies attempt to deal with one small piece of the IS implementation process without considering larger issues and this is what limits the success of IS implementation research. A lack of a common perspective among IS implementation is the result of this phenomenon [10]. In this paper, there is an attempt to discuss factors which influence the success of implementation of an EIS from a general perspective, "EIS versus other IS."

**Prototyping versus system development**

Prototyping and system development are two methods that can be used to implement an EIS within a firm. These methods cannot be differentiated from each other in a clear-cut fashion. Mahmood [13] conducted a study in order to compare these two different methods and his findings provide evidence concerning the complexity involved when differentiating between the two methods.

**Table 1. Factors influencing success of implementing information systems (IS), MIS, DSS, EIS**

| Author | IS (not specified) | MIS | DSS | EIS |
|---|---|---|---|---|
| Lucas [26] | 1 . Personal<br>2. Situational<br>3. Decision style | | | |
| Ginzberg [27] | 1. Commitment to poject<br>2. Commitment to change<br>3. Project definition and planning | | | |
| | | A. *People Related to Study*<br>1. Management involvment<br>2. Need for the system<br>3. User involvement<br>4. Training & Education<br>5. User requirements<br>6. User attitudes<br>7. Effective communication<br>8. Interface simplicity<br>9. Information usefulness<br>B. *System Related Strategy*<br>1. Identify the problem<br>2. Plan the implementation<br>3. Control the implementation<br>4. Do past implementation evaluation | | |
| Sander and Courtney [29] | | | 1. Top management support<br>2. High quality IS design<br>3. Sufficient design user<br>4. Motivated and capable user | |
| Leonard-Barton [30] | 1. Characteristics of the Innovation<br>2. Organization Influences on User Acceptance<br>3. Personal characteristics of potential users | | | |

**Table 1. (Contd.)**

| Author | IS (not specified) | MIS | DSS | EIS |
|---|---|---|---|---|
| Rivard [24] | 1. Technological factors<br>2. Organization factors | | | |
| Housdshel and Watson [6] | | 1. Commitment by executive<br>2. Carefully defined systems requirements<br>3. Carefully defined information requirements<br>4. A team approach to system development<br>5. An evolutionary development approach | | |
| Boltz [16] | | | | 1. Executive support<br>2. Business needs<br>3. Operating sponsor<br>4. Reliable data<br>5. Appropriate technology<br>6. Project mManagement |
| Kwon and Zmud [10] | 1. Individual factors<br>2. Structural factors<br>3. Technological factors<br>4. Task-related factors<br>5. Environment factors | | | 1. Commited executive sponsor |

**Table 1. (Contd.)**

| Author | IS (not specified) | MIS | DSS | EIS |
|---|---|---|---|---|
| | | | | 2. Operating sponsor<br>3. Appropriate staff<br>4. Appropriate technology<br>5. Management data<br>6. Clear link to business objectives<br>7. Management of organizat-tion resistance<br>8. Management of system evolution and spread |
| Wallace [22] | | | | A. Supported three people<br>1. Executive<br>2. Middle manager<br>3. Technical personnel |
| Frederick and Venkatraman [31] | 1. Ease of navigational capability.<br>2. Logical consistency<br>3. Flexibility<br>4. Strategy toolkit<br>5. Multi-user orientation | | | |
| Liang [32] | | | 1. The system<br>2. The user<br>3. The task<br>4. The environ-ment | |
| Miller [17] | | | | 1. Management support<br>2. Small, flexible |

**Table 1. (Contd.)**

| Author | IS (not specified) | MIS | DSS | EIS |
|---|---|---|---|---|
| | | | | development team<br>3. An interactive rapid prototyping development<br>4. A balanced perspective<br>5. Ongoing development. |
| Lucas *et al.* [11] | 1. Management support<br>2. User involvement<br>3. Conduct of the implementation process itself. | | | |
| Mohan *et al.* [18] | | | | 1. Role and commitment to management<br>2. One dealing with system development<br>3. Prototyping with live data<br>4. Ease of use<br>5. Low cost<br>6. Detailed data in system<br>7. Ability to access data |
| Turban [8] | 1. Technical factors<br>2. Data problem<br>3. Human factors<br>4. Change management<br>5. Process and structure<br>6. User involvement<br>7. Organizational support<br>8. External environment | | | |

**Table 1. (Contd)**

| Author | IS (not specified) | MIS | DSS | EIS |
|---|---|---|---|---|
| | 9. Project-related factors | | | |
| Barrow [12] | | | | 1. Find an executive champion<br>2. Maintain simplicity<br>3. Use MIS expertise<br>4. Ensure feasibility of of data<br>5. Develop a small but significant prototype.<br>6. Communicate to overcome resistance<br>7. Plan for the future. |
| Abdul-Gader [33] | EUC<br>1. Organization size<br>2. Centralization<br>3. End-user training<br>4. End-user computing planning<br>5. Applications development<br>6. End-users' literacy<br>7. Top management literacy<br>8. Top management involvement<br>9. Number of system analysts<br>10. Arabic applications | | | |

Using the prototyping method to develop an EIS has some advantages over other methods. Cole [14] discuss two advantages when using prototyping: the system provides immediate payback when any component is completed; and actual use produces better ideas for further development. Furthermore, Alavi, [15] describes many benefits of using prototyping, which include:

1. Achieve user participation and commitment to the project
2. Assist in better working relationships between users and designers
3. Assist in articulating or anticipating user needs

However, Alavi, [15] identified some shortcomings of the prototyping approach:

1. Difficult to manage and control
2. Difficult to prototype large systems.

Although there are some shortcomings associated with using prototyping methods, it is more beneficial than other methods because it is capable of satisfying user requirements and are capable of accepting changes that might need to be made. Furthermore, this approach involves managers in the implementation stage, which increases their commitment and support.

**Implementation of EIS**

To successfully implement an EIS following either prototyping or system development methods requires the consideration of a number of factors. There is no simple implementation process, and in many cases implementation may be by degree. Many authors describe factors that may prevent the implementation of an EIS from failing, and may even increase the degree of success. For example, Rockart and Delong [1] identify eight critical factors for successfully implementing an EIS. They include a committed and informed executive sponsor, an operating sponsor, appropriate staff, appropriate technology, management of data, a clear link to business objectives, management of organizational resistance, and management of system evolution and spread. Boltz [16] agrees that considering such factors will increase the probability of a successful EIS implementation, and ignoring these factors during the implementation process may reduce the probability of success. Even so, these factors are not to be defined in terms of their relative importance and impact on the implementation process since these factors may not be limited to eight factors [1], nor even six factors [16], nor five factors [17], nor seven factors [12, 18]. Each situation is unique and must be evaluated accordingly, which means that the factors associated with implementing an EIS are more guidelines than rules.

Joslow [19] states that implementation of an EIS is a technical challenge as well as an organizational challenge. Consequently, the degree of success of an EIS implementation will not be limited to six or eight factors. However, implementation success will relate to the output of integrated factors that can be divided into four

categories: (1) problems encountered when building the system, (2) resources of the organization, (3) structure of the implementation, and (4) features available within the EIS (see Fig. 1 and Table 2). These categories are discussed within the following:

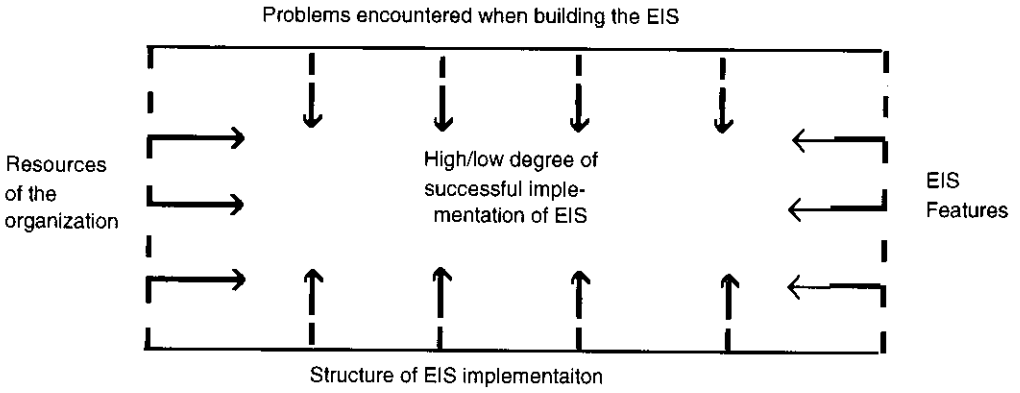


**Fig. 1. Factors influencing the success of the EIS implementation.**

**Table 2. Classification for the four factors**

A. PROBLEM IN BUILDING THE EIS
   1. TECHNOLOGY
      a. Software
      b. Hardware
   2. FINANCIAL
      a. Cost of the system
      b. Length of time

B. RESOURCES OF THE ORGANIZATION
   1. Training program
   2. Reliable data
   3. Skilled people

C. STRUCTURE OF THE IMPLEMENTATION
   1. Executive involvement
   2. Politics
   3. Logistics
   4. Linking to business

D. FEATURES AVAILABLE IN THE EIS
   1. Simplicity
   2. Speed
   3. Security
   4. Data validity
   5. Flexibility

Problems faced when building an EIS can be divided into two major components: financial and technological problems. Resources of an organization are divided into three components: training program, reliable data, and skilled people. The structure of the implementation can be divided into four elements: executive involvement, politics, logistics, and linking to business. Features available within the EIS may include simplicity of operation, fast response time, multi-level security, data validity, and flexibility.

## 1. Problems when building an EIS

Problems and obstacles will be encountered when building an EIS, and these problems may decrease the probability of a successful implementation of the system. Fireworker and Zirkel [3] identifies six areas where problems can appear: politics, logistics, hardware, software, time, and cost. Rockart and Delong, [1] Paller and Laska [2], Turban [8] emphasize the importance of selecting the appropriate technology, which includes both the software and hardware. Furthermore, the selection of technology is also affected by the available capital, the competition, and the mental model of the chief executive.

Problems encountered when implementing an EIS can be classified into technological and financial problems. Technological problems are limited here to software and hardware. Selecting the appropriate software is very important and must be considered very seriously. There is a wide range of software available on today's market. Software can be purchased separately, or as a single package. In either case, software features may include electronic mail, office automation, information management, and information analysis [8]. However, selecting appropriate software is not restricted to understanding what the user wants the software to do. Different divisions inside the same organization may have established different software standards. One department may use Lotus 1-2-3, or a spreadsheet package, and another might use the Multiplan or Excel [3]. The final selection of software would require linkage between differing software through the use of a common standard.

Hardware selection is somewhat different from how software is selected. Like with selecting software, compatibility is important, but unlike with selecting software, hardware is not easily upgraded or exchanged. Hardware is more permanent, and as the system becomes more integrated, problems may emerge as different groups within the same organization identify how they use the same standards differently.

Financial problems may be a barrier to implementing an EIS. Both capital costs, and the amount of time required to implement the system are important considerations. The cost of the system must be justified in terms of the benefits to be achieved through implementing an EIS [3]. Executives look at time in terms of either losing or gaining money. To build the system requires a great deal of time and planning. The positive impact of the system cannot be evaluated until after it has been fully implemented. Therefore, an organization must be willing and able to invest within the system and not expect rewards until the system has been completely developed.

Cost and amount of money is a major factor affecting the decision of whether or not to implement an EIS [3]. However, O'shea [20] distinguishes between two kinds of companies. He believes that the cost of implementing an EIS is not a major obstacle for large sized companies. However, for small and medium-sized companies capital is a major obstacle. The problem is that an EIS is a costly system to employ. Therefore, without obvious benefits, smaller companies are not usually candidates for implementing an EIS.

While being interviewed in *Computer World* [21], James Wethersby, an expert on executive information systems, indicated that historically problems occur within the planning stages in that an information system (IS) is selected prematurely. There are two common problems during the planning stage. The first problem begins when the executive is approached by IS contractors, and is asked about the organization's information requirements. From this brief discussion, a significant amount of money is spent, and later, the system must be changed at an even greater cost. The second problem is also related to IS contractors. The contractor has the executive to contractually obligate to accepting an IS on the basis of the organizations informational requirements, not on the success of the contractor to successfully fulfill these requirements.

While an IS contractor is trying to determine the information needs of an executive, four major mistakes may appear during the design stage. The first mistake is in foregetting that information transcends departmental or functional values. Therefore, it is crucial to investigate information categories cross-functionally. The second mistake is when an IS contractor asks the executives of an organization what they want from the sysem individually rather than as a group. The problem here is that executive requirement for information is always changing because they ask for information that they need most recently. By bringing executives together in a brainstorming session would encourage a wider range of information categories, which would be a more accurate reflection of the organization's information needs over time and not only in the present. The third mistake is that an IS contractor asks executives what they need and the executives do not know. This problem can be overcome by a conscientious series of questions. The job of an experienced IS questionnaire is to help executives accurately disclose their information needs. The fourth mistake is the manner in which different people solve problems. An EIS should not be developed as a whole. On the contrary, it should be developed, over time, as a prototype so that the executives of an organization may experience the system as it is being developed. In this way, change can be implemented during the design stage.

## 2. Resources of the organization

A number of key elements are essential in order to successfully implement an EIS. For example, a skill and training program is required if implementation of the system is to be successful. However, merely having such a program is not sufficient. The quality of the training program can destroy the effectiveness of an EIS implementation. In fact, Paller [2] goes so far as to suggest that without effective training programs for

supporting sponsors and executives alike, successful implementation will fail.

Therefore, executives must be willing to go out of their way to find training in support of the system. The ability to track information on the level which an EIS allows within an organization is a powerful tool. If chief executives do not upgrade their skills to use this tool effectively, the system could, in fact, harm the organization it was designed to benefit.

How reliable the data that is provided by the organization is also very important. Firms that update their data, that they start, are a major concern during and after the implementation has been completed. Different data bases have different characteristics, which impacts upon implementing an EIS.

### 3. Structure of the implementation

To successfully implement an EIS, organizational leaders must consider the importance of the implementation structure. It is very important that executives be supportive and committed to the operation of the EIS in order to overcome structural problems, especially during the early stages of development. An operating sponsor may be necessary if time is a factor since it is paramount that the executives remain intimately involved with the system.

One structural problem to be considered is the impact of the EIS itself upon the structure of the organization. The operation of an EIS changes the flow of information within the organization. Information flows directly to the top executives rather than being maneuvered through middle managers. Consequently, there is frequent resistance on the part of middle managers because their political strength is significantly impacted by this change.

Another structural consideration for an organization is the number of offices or branches in different locations. How these different organizational structures are integrated throughout the EIS also impacts upon the structure of the organization. Fireworker and Zirkel [3] believe that logistics will be a major concern within this situation, and must be given serious consideration. However, a successfully implemented EIS will make structural problems of this kind more manageable.

Clear linkage to business objectives was discussed by Rockart and Delong [1] in order to examine the benefits and advantages of an EIS. It is importan. that implementing an EIS will benefit an organization in achieving its objectives. Linkage must be made between the mental model of the executives and orgnizational objectives through the EIS.

Another key element for a successful implementation of an EIS is the support of and commitment to the system by top level management. The literature indicates that the support and commitment of the executive and operating sponsor are so important that without this EIS implementation will fail [1], [2], [6], [8]. Their lack of commitment may inflame the resistance of middle managers which the system naturally fosters.

Misuse of the system may harm morale within the organization, and undermine confidence on the part of lower and middle managers of not only the system, but the top level 4. executives as well.

## 4. Features of an EIS

Many authors have discussed the variety of features in an EIS [1], [3], [6], [22]. The number of features available in the system influences its success and its attraction to other organizations. Wallace [22] demonstrates that there are essential features with which an EIS should be endowed. For example, it should be reliable, responsive, and very easy to use. Fireworker and Zirkel [3] provide a list of critical features that influence the degree of successful implementation:

1. Top-down design approach
2. Simplicity
3. Fast response time
4. Multi-level security
5. Data validity
6. Simple data in-out procedures

The following briefly describes each of these features:

**Top-down approach** is possible to follow since the top managers will be able to determine and supply the final approval of what should and should not go into the system.

**Simplicity** means that the system must be easy to use. The system ought to effortlessly guide the user directly to areas of concern so that information retrieval, storage, and correlation are not time-consuming. The amount of time required for a manager to make a decision is critical. The system must support the decision-making process and remain somewhat transparent while operating.

**Fast response time** for both hardware and software tasks is important because a slow system will be slow at every level within the organization, which could be accumulative and thereby slow a business to a crawl. A fast response curve would improve efficiencies at all levels, facilitating efficiency within the organization in general..

**Security** within the system is paramount since only those whose job is benefitted by having access to records ought to have access to them. Compartmentalizing information through a security code hierarchy helps to manage complexity within the system by safeguarding an efficient flow of inofrmation through a well-structured hierarchy of security codes.

**Data validity** provides a system of cross checking information within the system in order to insure that the information is accurate.

The number of features within the system determines the benefits of the system to the organization. This does not mean, however, that more features will have greater benefit to the organization. An EIS ought to be cost-effective as well as useful. If a particular feature does not benefit an organization, there is no reason to include the feature within the system. EIS contractors want to sell as many features as possible. Executives want to purchase as few as possible. Somewhere in between is the appropriate features mix tailored to fit the needs of an individual organization. As was stated earlier, the proper mixture of features is identified after a thorough and involved process of working with the system in real situations by EIS users is completed.

## Framework for Implementing an EIS

The implementation of an EIS must have executive support and must be sponsored by operating managers [1], [2], [16]. These two factors are necessary and the implementation of an EIS will not succeed without their cooperation. Assuming that an organization has the support of the executives and sponsor, there will be additional factors that determine a successful EIS implementation. Organizations will tend to use the system when there is a match between the following two factors:

1. The problems encountered during building the system
2. The features available within the system.

The list of problems associated with the building of an EIS are provided here, however, this list may not be comprehensive. These problems include politics, logistics, hardware, software, time, and expense [3], and data management and training [23].These problems are a major concern which must be resolved before implementing the system, otherwise there is a high probability that the system will fail.

The second important factors to be considered include the benefits that the system provides and the number of features within the system. Some of the necessary and important features that must be included within an EIS are described below: simplicity, fast response time, security [3], data availability [2], [3], and flexibility [23]. As the number of these features increase, well capitalized organizations will be tempted to use the system and invest a large amount of money to insure successful implementation of the system.

From these two factors, four situations are developed that represent the degree of successful implementation. The first factor is problems encountered in building the system which runs from very few problems to many problems. The second factor will run from very few features to many features of the EIS. (see Fig. 2)

### Unsuccessful implementation

Users of EIS fail to implement the system when there are many problems associated

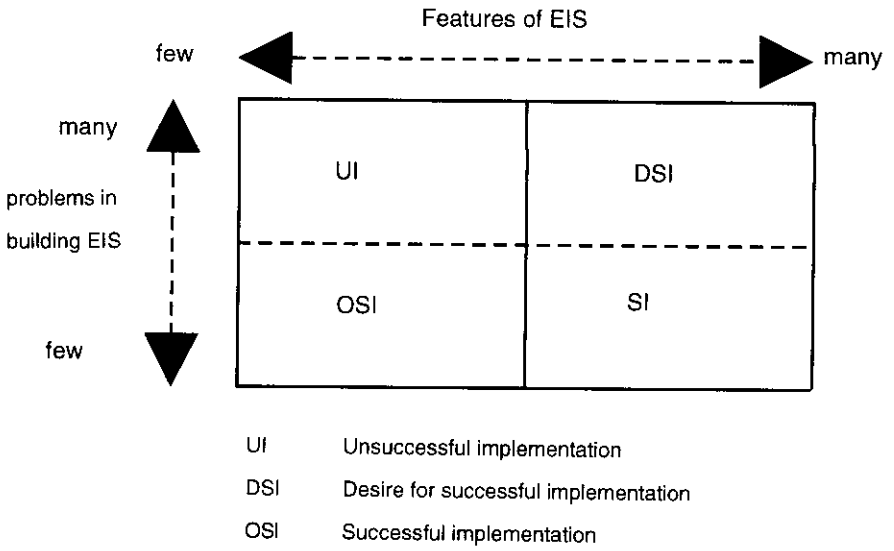


**Fig. 2. Framework for implementation of an EIS.**

with building the system. At the same time, problems restrict the number of features within the system.When organizing an EIS, many problems must be considered from employee relationships (politics), plant operations (logistics), and technology (hardware and software). At the same time, try to use the system that is not secure, flexible, or simple will insure that the implementation program will fail.

### Opportunity for successful implementation

Organizations will be encouraged to use an EIS when problems associated with the expenses of the system, the cost of training, logistics, politics, and appropriate technologies have been resolved. The future for an EIS is bright in this situation, and in general, elimination of these problems increases the degree of success of EIS implementation. Over the long-run, features like flexibility, speed, and simplicity serve to protect the future viability of the system.

### Desire for successful implementation

Users of an EIS desire to implement the system successfully, especially if there are many features within the system. However, a large number of problems during the building process keeps the users frozen at this stage. Unless they overcome the problems, or resolve some of them (e.g. borrowing money if the problem is the cost of the EIS, eliminating the time concern to build the system), implementation will be very difficult.

**Successful implementation**

Successful implementation of an EIS is fostered when there is strong support from the executive, a sponsor who will be responsible for the system, when there are few problems when building the system, and many features within the system. The implementation will be very successful and an organization will be encouraged to employ the system when conditions that are necessary for successful implementation are satisfied.

**Measurement of the degree of successful implementation**

The measurement issue is very important and needs to be investigated for future empirical research. In general terms, there is a lack of measurement methods of measuring the impact of operations of an EIS, which means the success of an EIS must be estimated. According to Rockart & Delong [1] the most difficult question concerning the EIS user is the question of how the system is to be effective or successful. There are some measurements to determine the success of an EIS developed by Housdshel and Watson [6]. These measurements include the following: an assessment of benefits, frequency of use, and user satisfaction. But the validity of these measurements have yet to be determined.

Rockart and Delong [1] provide six criteria for judging an EIS. These criteria may indicate how the system impacts the organization and the executive. The criteria are outlined within the following:

1. The time that executives spend using the system
2. How much more work done and how much time is saved
3. The effect of EIS on changing the executive thinking about using and managing information
4. How organization will utilize technology
5. The impact of the system on changing executive's understanding and control over the business
6. The impact of the system in improving the organization's planning and control process.

The success of implementation can be measured by user satisfaction. Rivard (24) presented two conflicting dimensions of implementation success: user satisfaction and the ability of information system (IS) management to demonstrate that tangible benefits result from user activities. According to Lucas *et al.* [11] researchers have used the following measurements to measure the success of information systems:

1. The use of the system
2. User satisfaction

3. Favorable attitudes toward the system
4. Payoff to the organization

## Future Trends of EIS

The use of the system will be increased in the future in the coming years, 25 percent of American corporate executives will use the system to monitor such activities as balance sheets and marketing trends [25]. However, measurements will still be required to order to assess the impact of the EIS.

The adoption of EIS will become increasingly important within the near future. EIS could be responsible for saving about $100 million in such a company, and the reason for this savings is that managers retrieve data faster and understand it better because of EIS [25].

## Conclusion

The name of the system (EIS, ESS, EFS) is not very critical so long as the label refers to a system with EIS characteristics. An EIS will not only increase the awareness of the executive of the current state of the organization, but it will also inform him/her about changes that may occur within the organization.

The success of an EIS implementation program will not only be limited to one or two, or even eight factors (e.g. critical success factors), but it will also depend upon many factors that comprehensively fall under four criteria: assuring there is a commitment and sponsor from the organization, overcoming problems at the time of building the system, insuring the availability of resources needed, and increasing the number of features that originally came with the system.

In the future, organizations that have an EIS will discover that they are more competitive, which means that their competitors will eventually adopt an EIS.

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# العوامل المؤثرة على نجاح تنفيذ نظم المعلومات لمنفذي الإدارة العليا

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**ملخص البحث.** نظم المعلومات لمنفذي الإدارة العليا تطلع الإدارة العليا على حالة المنظمة من خلال النماذج المتطورة في تلك النظم. هذه الورقة تناقش العوامل التي تؤثر على نجاح تنفيذ هذه النظم المعلوماتية وذلك بالاعتماد على الأدبيات المتعلقة بتنفيذ نظم المعلومات المتعددة والمختلفة. كذلك تم البحث في الفروق والاختلافات بين نظم المعلومات لمنفذي الإدارة العليا والنظم المعلوماتية الأخرى. هدف هذه الورقة بشكل محدد هو وصف العوامل الأساسية والضرورية لنجاح تنفيذ تلك النظم المعلوماتية الخاصة بمنفذي الإدارة العليا. حيث يوجد هناك أربعة محددات أساسية يجب على مستخدمي هذه النظم الاهتمام بها: المشكلات المواجهة عند بناء النظام، موارد المنظمة، قواعد البناء والتنفيذ، والمزايا الداخلة مع النظام نفسه. استنادًا على هذه العوامل الأربعة يمكن وصف درجة النجاح في تنفيذ النظام إلى: تنفيذ غير ناجح، فرصة لنجاح التنفيذ، رغبة في نجاح التنفيذ، أو تنفيذ ناجح.