
Management Challenges in IS: Successful Strategies and Appropriate Action

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IS managers are facing new challenges in the 1990's. Corporate culture is changing and IS must adapt to this new environment to meet the demands of the corporation. In doing so, IS is moving from a role of service provider to that of enabler. This new role brings on new management challenges for IS executives.

Along with this shift in role, new technologies are also changing the way IS managers perform their work. Managers must be conversant in a myriad of new IS topics and must be able to cut through the vendor hype and see the real possibilities for use in their companies. Topics such as business re-engineering, IS infrastructure, legacy systems, object-oriented technologies, data mining and data warehouses, and problems with the millennium change are creating new challenges for IS managers.

In 1990, James McKeen and Heather Smith founded the Queen's IT Management Forum. They invited senior IS managers from ten leading-edge organizations in a variety of industries to join the forum. Forum members meet quarterly to discuss problems and challenges their IS divisions are facing. Each quarter, the forum members select a topic for discussion. These topics range from technical issues, such as object-oriented technologies and better approaches to testing, to more business and political issues, such as IS-user conflict and marketing IS.

McKeen and Smith facilitate the quarterly meetings and produce a summary of the discussions. These summaries are then distributed to all forum members for feedback and their comments are incorporated into the final version of a paper on the topic. Until now, forum members were the only ones able to see these papers. McKeen and Smith have compiled these papers into a book which is now available to non-forum members. This provides IS managers in other organizations with a source of insights

and suggestions of 'best practices' as defined by the forum members.

This book does not contain technical instructions on many topics. Instead, management issues are presented. Anyone interested in learning about management issues facing the IS industry will benefit from reading this book. The audience for this book spans from executive IS managers to project managers. Also, academic researchers looking for a thorough overview of current IS management concerns will find this book quite useful.

This book is laid out in four sections: Managing IS in the Organization, Managing the IS Organization, Managing IS Performance, and Managing the Information Resource. Section 1: Managing IS in the Organization contains three chapters dealing with management issues relating to the IS division fitting into the overall organization. Chapter 2: Re-engineering the Corporation provides an excellent examination of corporate re-engineering. Three types of business re-engineering are defined: process re-engineering, business re-engineering, and corporate re-engineering. According to the book, the first and last of these are not new concepts. These are just new names for existing management practices. However, business re-engineering is truly a new concept. This book presents a good overview of the issues facing managers of IT in a business re-engineering situation including an example of a successful approach to re-engineering.

Other issues addressed in the first section are managing IS-user conflict and marketing information systems. These two chapters fit together well with issues of how IS fits into the overall organization. Users are skeptical of the IS division because of past shortcomings in delivering systems on-time and within budget. The chapter on IS-user conflict contains recommendations for IS

managers to address some of these conflicts. The chapter on marketing IS uses Maslow's Needs Hierarchy to explain how user departments view their relationship with IS. Users will not treat IS managers as business partners until they feel that their Level I needs have been satisfied. This analogy is very straightforward and puts the issue of IS-user conflict into terms that are easily understood.

The section concludes with an interview of Ken Smee, Executive Vice President of The Royal Bank Group. Smee discusses the issues of marketing IS which are presented in this section and the approach employed by The Royal Bank Group. Smee's comments provide feedback on the chapters and help the reader put the issues into perspective.

Section 2: Managing the IS Organization looks at re-tooling IS, re-engineering IS, managing the IS infrastructure, and human resources management for IS. Chapter 5: Re-tooling Information Systems: A New Vision for IS presents a comparison of the 1980s view and the 1990s view for the vision for IS management. For example, the authors indicate that the 1980s view of staffing was to hire specialists, whereas in the 1990s the goal will be to hire skilled generalists. IS management will move from reactive to proactive, and the overall IS mission will evolve from technology management to a mission of corporate change in the 1990s.

This section also discusses the process of re-engineering IS. The authors predict that IS managers will be forced to re-examine the purpose of IS in their organization. Some functions should be outsourced while others should be strengthened. The process of business re-engineering is applied to the business of IS with potentially far-reaching consequences.

Chapter 8: Human Resources Management for IS offers a discussion of an interesting 'problem' for IS in the 1990s. The problem is turnover. During the 1980s, turnover of skilled professionals was very high. This created training and recruiting problems for IS divisions. In the 1990s, the problem has turned around and turnover has been extremely low - below 10% for the industry and as low as 1% or 2% in some companies. Without turnover there is not enough new blood to drive new ideas. Thus, low turnover is a problem in the 1990s just as high turnover was a problem for IS managers in the 1980s.

This section contains an interview of Kamil Khan, President and CEO Bell Sygma Inc. Khan reflects on the chapters in the section and presents his vision for IS at Bell Canada.

Section 3: Managing IS Performance discusses approaches for improving the performance of the IS division. These include the use of benchmarking, improving productivity, using CASE tools and object-oriented technology, and better testing procedures. The

chapter on benchmarking contains a list of measures currently used in IS. It also contains a list of some suggested diagnostic measures. These lists may easily be used as a check list for IS divisions wishing to improve their measures of performance.

Chapter 10: Improving System Development Productivity presents several commonly held assumptions about system development productivity. These assumptions are challenged and recommendations for managers are listed for each. This chapter is very thought-provoking and will cause many IS managers to rethink many of the things they currently take for granted. Chapter 11 discusses the use of CASE tools and how those tools have not led to the productivity improvements which they were touted to provide. The authors suggest that one of the reasons for this lack of improvement in productivity is the increase in 'hand-offs' which come with the formalized development methods which usually accompany the introduction of CASE tools.

An introduction is given to object-orient (OO) technology. The introduction is not technical, but provides an overview of the management issues relating to introducing OO technology in a corporation. The authors conclude the chapter with the warning that OO is still unproven. They also suggest that managers may avoid the OO bandwagon for a little longer without worrying about being left behind. They claim that early adopters will gain very little advantages over late comers. Robert Rubin, Vice President of IS at Elf Atochem North America is interviewed about metrics used at Elf Atochem and the success they have had using benchmarking.

The final section of the book looks at Managing the Information Resource. This includes chapters looking at managing IS complexity, information mining, legacy systems, and preparing the millennium change. Chapter 15: Mining for Corporate Information provides an introduction to the management issues involved in performing data mining and building a corporate data warehouse. Four different strategies are discussed for creating corporate information. A simple strategy is to create corporate information as needed and criteria are given to decide if this approach is best for your organization. A more elaborate strategy is to create enhanced query management functionality. A third strategy is to create a customer information file which is extracted from the operational data. Finally, if the need exists, an IS organization may choose to create a data warehouse. This is the most involved and most expensive approach. However, it also provides the most potential benefits.

Chapter 16 discusses the management issues relating to dealing with legacy systems. The authors warn that many IS managers believe that fixing the problems with legacy systems is a one-time ordeal. However, this is

not necessarily the case. The state-of-the-art systems which are being created today may become the legacy systems tomorrow. The most important feature of creating non-legacy systems is to 'build infrastructure not function.' The application architecture should be designed as to promote reusability and shared data.

The final chapter in section 4 looks at some of the problems IS organizations will face on January 1, 2000 when the next millennium arrives. This chapter is not designed to scare the IS manager, but is included as an introduction of some of the possible ramifications of the new century and its affect on date routines in computer systems. This section concludes with an interview of John Loewenberg, Senior Vice President of Aetna Insurance.

Overall, this book provides a thorough examination of many of the challenges which are facing IS managers in the 1990s. Senior executives, directors, and project managers will all benefit from reading it. Also, academic researchers looking for a good overview of the current state of IS issues will find it useful.