Chapter XIX

Critical Factors in the Development of Executive Systems—Leveraging the Dashboard Approach

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ABSTRACT

Based on the Rockart’s critical success factor (CSF) approach, this chapter puts forward a practical method to guide the development of executive information systems (EIS) in organizations. This method extends the current theory of EIS by using the concept of the dashboard of information to show how an enterprise-wide approach to the development of more effective decision support for managers can deliver tangible benefits without requiring the time-consuming and single-decision focus of the traditional development methods. This method also attempts to leverage the latest computing technologies now available for the development of such systems, notably graphical user interfaces (GUI), data warehousing (DW) and OLAP. The proposed approach is illustrated by examples of dashboard developments, which show how managers should carry out the analysis and development of such a system in their own organizations, business units or functional areas.
INTRODUCTION

In this chapter, a practical method based on the critical success factor (CSF) approach proposed by John Rockart as early as 1979 is put forward to guide the development of executive information systems in organisations. This method extends the current theory of EIS by using the concept of dashboard of information to show how an enterprise-wide approach to the development of more effective decision support for managers can deliver tangible benefits without requiring the time-consuming and single-decision focus of the traditional development methods. This method also attempts to leverage the latest computing technologies now available for the development of such systems, notably, graphical user interfaces (GUIs), data warehousing and online analysis process (OLAP).

Based on a top-down CSF analysis, a hierarchy of indicators can be built up which covers all relevant aspects of the management of an organisation and supports the achievement of strategic goals. The outcome of this analysis can then be used as a blueprint for the development of an organisational DSS including a large database or data warehouse and a set of differentiated interfaces serving the specific needs of all managers. Each manager is given access to a dashboard containing the indicators which he or she most requires and has control over. Our approach is illustrated by examples of dashboard developments which show how managers should carry out the analysis and development of such a system in their own organisation, business unit or functional area.

The resulting organisational EIS may then become a support for the delegation and decentralisation of decision making and control in the organisation as top managers have guarantees that their subordinates have access to reliable and timely information to monitor their own performance. It also provides an incentive scheme for staff and can be used to compute performance-related bonuses in a manner which is fair and objective.

DIFFICULTIES IN DEVELOPING TOP MANAGEMENT’S INFORMATION SYSTEMS

After more than 30 years of research on how the work of managers can be supported by computers, the observation that developing computer systems that are truly useful for top management is a highly complex and uncertain task is still as valid as ever. Information systems for executives raise specific problems, which have primarily to do with the nature of managerial work itself (Mintzberg, 1973), as they are intended to tackle the needs of users whose most important role is “to create a vision of the future of the company and to lead the company towards it” (King, 1985, xi).

The major difficulty in supporting managers with computer systems comes from the very nature of management work (Mintzberg, 1973, 1975, 1976), where over 80% are concerned with communication, coordination and people management. At
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