Chapter VIII

Decision Support and Data Warehousing:

Challenges of a Global Information Environment

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Abstract

This chapter is dedicated to the major managerial, organizational and technological aspects of development of data warehouses in a global information environment, when different external sources of information are available and potentially may have value for decision support and managerial analysis. It summarizes the major benefits that become available for businesses if they decide to integrate information from external sources into their data warehouses. It also introduces the overall organizational framework of development of data warehouses that are based upon the information from different external sources. Furthermore the author hopes that understanding of the framework introduced will not only inform practitioners (both information technology (IT) specialists and managers...
in different spheres of business) of new possible approaches to design of decision support systems but also assist in the improvement of approaches to decision-making procedures.

Introduction

Data warehouses play an important role in the automation of managerial analysis and in decision support. The main purpose of this technology is to accumulate and organize information in order to make it useful for analysts and decision makers. Usually technical specialists and managers are concerned with the development of data warehouses that are based on information from operational information systems located within the organization. However any business is influenced by external factors and oriented to the external business environment. Hence information about the surrounding world and economic conditions may sometimes be more important for creative analysis and decision making than internal information. That is why the presence of valuable information in different external sources and its potential value for decision making make it necessary to integrate external information into corporate information flows, thus making data warehouses more valuable to analysts and managers.

On the one hand development of data warehouses that contain information from external sources is a non-trivial task that may appear to be an expensive exercise in terms of both financial and non-financial resources. On the other hand selection of adequate strategies for the usage of information from external sources may determine the overall efficiency of a business and its competitive power in our age of global information systems and rapidly changing business conditions.

The main objective of this chapter is to describe the major potential benefits that may arise for decision makers as well as the major challenges that systems integrators and managers will face if they decide to follow the strategy of integrating into the global information environment.

Background: The Nature of Data Warehousing

Corporate decision support tools and management information systems are commonly oriented around the accumulation of information from scattered