Chapter I

Knowledge Economy and Intelligent Enterprises

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ABSTRACT

Intelligence enterprises are evolving where knowledge management and other business intelligence (BI) solutions provide the in-depth analytical capabilities needed to turn raw data into actionable knowledge for an enterprise. This chapter describes why there is a need for such intelligent enterprises in knowledge-based economy and how to create those enterprises.

INTRODUCTION

The growth of e-commerce and the Internet is bringing fundamental changes to business models, societies, and economies. With the increasing advancements of information and communication technologies, customers, suppliers, and business partners are demanding more from business enterprises. Organizations are exploring new markets, new services and new products in response to forces such as advances in information and communication technologies, business strategies such as mass customization, globalization and shorter production cycles. Enterprises of the 21st century need to offer a high demand of services and have to increase revenue and productivity through reduced expenditures and a better level of service with fewer

resources (Hardy, 1998). In an electronic business environment, organizations are expected to achieve greater profit, reduce overhead and have flexible workflow processes by collaborating business information, partners, and physical resources in a more effective manner (Porter, 1998). To cope with these growing and complex requirements, enterprises of tomorrow need new types of specialized tools and advanced services and new advanced approaches to support their business activities. The technologies can be leveraged to create **"intelligent enterprises,"** which will not only provide better-focused and customized services to customers, but also create business efficiency for building relationships with suppliers and other business partners on long term basis (Mueller & Dyerson, 1999).

Intelligence enterprises are where knowledge management and other business intelligence (BI) solutions provide the in-depth analytical capabilities needed to turn raw data into actionable knowledge for an enterprise. In an intelligent enterprise various information systems are integrated with knowledge gathering and analyzing tools for data analysis and dynamic end-user querying of a variety of enterprise data sources. These solutions enable an enterprise to improve customer service and partner relationships and to create marketable knowledge products from an enterprise's own internal data. Creating intelligent enterprises will not be an easy exercise because an enterprise may have to overcome tremendous hurdles in bringing disparate enterprise data sources into a cohesive data warehouse or knowledge management system. Many organizations already have started developing business intelligence oriented systems. BI is an umbrella term for a set of tools and applications that allow corporate decision makers to gather, organize, analyze, distribute, and act on critical business information with the goal of helping companies make faster, better, and more informed business decisions.

Successful BI systems provide an integrated view of business, extend analytical capabilities to users, and leverage a corporation's data and expertise—wherever that data and expertise reside in a distributed enterprise. BI encompasses a range of intelligence systems and analytical applications that include data warehouses and marts; ad hoc query tools; enterprise reporting tools; online-analytical-processing (OLAP) engines; and prepackaged queries, templates, and reports. BI tools help as decision-support systems (DSSs) and executive-information systems (EISs). BI tools and applications are increasingly Internet-centric. As the number of users who need access to these mission-critical tools and analytical applications has risen, companies have had to look for products that are simpler to use with easier Web user interfaces (Mueller & Dyerson, 1999).

The ability to make fast, reliable decisions based on accurate and usable information is essential to most business enterprises. BI solutions aim at achieving critical business advantage by providing knowledge workers with easy access to the right information, on demand, from wherever it is created and/or maintained within the organization. With the right strategy, an organization can transform data from various disparate sources into a usable format that can provide timely knowledge of business critical information, including customer relations, markets, suppliers, emerging trends, and internal operations. BI and data warehousing techniques are key enablers of e-business strategies as well as Customer Relationship Management (CRM) programs. They integrate data and customer information across business functions and customer interaction channels and make it easier to work with partners and customers.

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