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Implementation Management of an E-Commerce-Enabled Enterprise Information System: A Case Study at Texas Instruments

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This chapter presents a case study of an overview of the efforts of Texas Instrument's (TI's) internal and external ERP implementation, with a focus on linking its ERP system in a global e-commerce setting. This linkage is especially important since it had been stated in TI's strategic plan as an objective of this project to provide visibility of the ERP system to external constituents via Web linkages along with the objective of standardizing internal processes and important information technology systems to support market needs. Thus, its ERP system is central to managing its supply chain and B2B e-commerce linkages from both a customer and supplier perspective. Issues faced by TI are clearly outlined with future questions also posed in the final section.

INTRODUCTION

The integration of enterprise systems and the supply chain to an organization is becoming more critical in an ever-changing, globally competitive environment. As markets mature and customer preferences become more diverse and specific, quick response to those needs is required to maintain competitive advantage. This quick response will require close relationships, especially communications and information sharing among integrated internal functional groups, as well as the suppliers and customers of an organization. Texas Instruments (TI), headquartered in Dallas, Texas, is one organization that has come to realize this requirement for building and maintaining its competitive edge. One strategic decision made by the organization was to implement an enterprise resource planning (ERP) system with a focus on linking it with a global electronic commerce (e-commerce) setting.

This case study provides an overview of the efforts of TI's internal and external ERP implementation that led to over 70% of the transactions being conducted in a global e-commerce setting. TI's strategic goals include providing visibility of the ERP system to external constituents via Web linkages and standardizing internal processes and information technology to support market need. The e-commerce linkage is especially important in achieving these goals. Thus, TI's ERP system is central to managing its supply chain and Web e-commerce linkages from both a customer and supplier perspective.

In this situation there were a number of major players, including project management direction from Andersen Consulting Services, software vendors such as SAP and i2 Technologies, hardware vendors such as Sun Microsystems, and various suppliers and customers of TI. Part of the process involved outsourcing some of TI's internal information systems capabilities to these vendors, especially Andersen Consulting.

The various stages of implementation from adoption to preparation and operation are detailed as separate sections. At each stage of the implementation TI used performance metrics to manage the process. We also provide an overview of how these performance metrics played a role in the implementation.

STRATEGIC SYSTEMS IMPLEMENTATION BACKGROUND

Much research has been undertaken to develop a better understanding of IT implementation and to assess its contribution to improving organizational efficiency. A meta-analysis of IT implementation research (Lai &

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