Chapter II

A Typology of Inter-Organizational Information Systems

Joseph B. O'Donnell
Canisius College, USA

Bonnie C. Glassberg
Miami University, USA

Abstract

This chapter provides a typology of inter-organizational information systems (IOISs) in order to provide a better understanding of the purposes of IOISs and their organizational uses, and to fill in the gaps not yet investigated by researchers. It provides a comparison of IOISs in terms of network structures and type of information exchanged, covers the benefits and risks of these systems, suggests new areas for research, and describes expected trends for IOISs. This typology highlights the differences and similarities not only among the many configurations of IOISs available today, but also contrasts this with internal Web sites (intranets) and public (external) Internet Web sites. It is hoped that the typology and ideas presented here provide new insights for academics and practitioners that will be used to improve the evolving landscape of electronic commerce.
Introduction

Inter-organizational information systems (IOISs) are essential to the growth of business-to-business (B2B) electronic commerce (e-commerce). According to Forrester Research, this market segment is expected to reach $2.7 trillion in sales by the end of 2004 (Kafka, 2000). Web-based IOISs facilitate the processing of B2B e-commerce transactions and enhance the seamless communication of information between businesses. Despite the importance of Web-based IOISs, such as extranets, the majority of IOIS research has focused on older systems, such as electronic data interchange (EDI). Additional research regarding e-commerce has focused on business-to-consumer (B2C) e-commerce. To understand the purpose of IOISs and their organizational uses, and to fill in the gaps not yet investigated by researchers, this chapter provides a typology of IOIS. This typology highlights the differences and similarities not only among the many configurations of IOISs available today but also contrasts this with internal Web sites (intranets) and public (external) Internet Web sites. This approach offers new insights for practitioners and researchers.

The chapter is organized as follows. First, the background of an IOIS is presented. Next, the typology of IOISs is introduced. Two general areas where these systems differ, the structures of the relationships, and the types and formats of the information exchanged, are identified and discussed in separate sections, respectively. Each system has features that help to distinguish it, and these differences will be highlighted. Two tables (1 and 2) are provided to aid understanding and offer a broad landscape for the rest of the book. Next, the benefits and risks of an IOIS are discussed. Later, previous research on EDI and Web-based systems is introduced to identify exciting new areas for investigation. Finally, the authors identify future trends for IOISs, and the implications for researchers and practitioners are discussed.

Background

The Internet provides the backbone for high-speed communication, collaboration, and commerce. Originally designed in 1969 for the Department of Defense, the Internet now is a network of computer networks used by individuals and organizations to communicate information and process transactions. Prior to the wide acceptance of the Internet, one of the first types of IOISs to emerge was Electronic Data Interchange (EDI). EDI systems offered a link between two companies for the hands-off transmission of data in a fixed text-based format without the use of the Internet. As the Internet evolved, it facilitated the
The Role of Vertical and Shared Leadership in Virtual Team Collaboration
www.igi-global.com/chapter/the-role-of-vertical-and-shared-leadership-in-virtual-team-collaboration/143505?camid=4v1a