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Identifying Business Processes for, and Challenges to, Electronic Supply Chain Management: A Case Study in a Small Business in North-West Tasmania

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This case examines the business practices of a small company in North-West Tasmania and identifies problems and challenges for electronic supply chain management (ESCM). The company is adopting ESCM to increase the speed of invoice production and to improve the accuracy of inventory control in its current supply chain management (SCM) system. The case study provides detailed analysis of the company, its merchandise and its experience of implementing ESCM. The analysis begins with an examination of current business practices, human resources, the information system, and issues related to customers, suppliers, products, and inventory control. Using this information, the case study examines how the company processes and fulfils sales orders, updates its inventory, and handles the receipt of ordered goods. The case concludes with a summary of the shortcomings of the company's current SCM system and the main challenges the business faces in implementing ESCM. This study forms part of a larger ongoing investigation being conducted into SCM within small and medium-sized businesses in North-West Tasmania.

BACKGROUND

Most academic literature on supply chain management (SCM) and electronic commerce (EC) has been based on large corporations (Kalakota and Whinston, 1996, 1997; Gattorna, 1996; Applegate, McFarlan and McKenney, 1996; Treese and Stewart, 1998; Mougayar, 1998). While the principles for large and small businesses may be deemed to be similar, there are clearly some significant differences with regard to implementing ESCM. For example, the resources of small companies may be insufficient:

- To purchase expensive IT systems;

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- To handle expensive IT systems failure;
- To develop appropriate risk management strategies.

Handfield and Nichols (1999) include in their definition of SCM: information management; order processing; inventory management; and customer service. They conclude that all businesses, regardless of size, need these facilities in order to function and to have the possibility of achieving competitive edge. ESCM has the potential to enhance these possibilities for competitive edge by improving cost reduction, error reduction and shorter order cycle times. Winston, Stahl and Choi (1997) argue that the Internet is a great equalizer because it is difficult to distinguish a small business from a large one. For example, the Web pages of a small business can look as good as those of a large corporation. Furthermore as Hughes, Ralf and Michels (1998) point out small and medium sized enterprises (SMEs) can reach customers worldwide through the Internet at relatively low costs and actively compete with large corporations. However, companies implementing ESCM or electronic commerce need to be able to evaluate the suitability of their products for these activities. In this regard, Remington et al. (1999) provide a list of points for determining product suitability for ESCM and electronic trading, including the following:

1. Consumer acceptance of 'unseen' purchases;
2. Traditional reliance on personal selling/consultation;
3. Tangible or intangible product;
4. Product perishability.

In the context of the case study analysed in this paper it is evident following the above points that:

- In most cases, the company's customers have 'seen' the products and are already actively using them;
- There is little need for personal selling of the company's products as its customers know their own needs, and in most cases, can order the required product without assistance;
- While the company's products are all tangible (making them potentially unsuitable for ESCM), customer requirements for quick processing of orders and information on product availability support the case for ESCM implementation;
- The company's products are nonperishable and they also require quick delivery times particularly for certain products, e.g., spare parts for expensive and costly machinery.

In this context, implementing ESCM appears to offer the company the potential to achieve advantages in terms of improved inventory control and more responsive customer service. However, implementing ESCM also raises a number of problems that apply specifically to small businesses, particularly with regard to IT costs and risks. For example:

- Traditionally ESCM systems such as electronic data interchange (EDI) have usually been beyond the resources of SMEs both in terms of cost and the need for expert personnel;
- Even when SMEs have adopted internal ESCM they are rarely able to push larger suppliers or customers to adopt electronic trading practices;
- When SMEs look to implement ESCM they are rarely able to handle the risks involved in implementing innovative ESCM systems and applications.

It is in this context that this case study analyses the experiences of a small company in adopting ESCM. The company is located in a small country town on the North-West Coast

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