Chapter 4.3
Adding Value to SMEs in the Courier Industry by Adopting a Web–Based Service Delivery Model

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ABSTRACT

The aim of this research is to design a framework for a Web system that is intended for linking small and medium transport companies with their customers. The unique aspects of the framework are two-fold. The framework utilizes Web services, which means that it can be applied to existing software and hardware environments. This reduces the need for specialized integration and development, the cost of which becomes a further barrier to SMEs in adding value to customers through existing systems. The framework is additionally designed to link both communities of SMEs and customers in a fledgling digital ecosystem arrangement. Such arrangements offer inherent added value to both types of participants.

INTRODUCTION

One of the great promises of the Internet is that it would help level the playing field somewhat for small to medium businesses by giving them access to market share and allowing them to compete more effectively with larger corporations. We know that technology does make small businesses more competitive and helps in reducing the exclusivity of markets once thought to be beyond their reach. However, the playing field will never be really level and "small businesses are seldom on the cutting edge when it comes to a new technology" (Campbell, 2004). These companies simply cannot afford to provide the value-added services offered by their larger counterparts.

The courier industry is a very good example of this. Small and medium size courier companies generally offer a broad range of services and can

provide valuable local service and knowledge to their customers. Utilization of the Web for e-commerce by these companies gives a number of advantages for the logistics trade, such as new market penetration, targeted advertisement of new and existing services, increased quality of services, acceleration of information processing, and customers' feedback improvement. However, these companies are often overlooked in favor of the larger providers that can offer a more expensive but value-added service. Services such as tracking of shipment deliveries, immediate delivery notification, and other information including GPS information is expensive to provide but gives customers value-added services they are willing to pay for. Another barrier to adoption is the high demand placed on resources for a Web system's ability to integrate with existing systems. This in turn increases the cost of qualitative logistics for the Web-system development.

While small and medium businesses may not be on the cutting edge of technology, generally their smaller size gives them agility to more rapidly adopt technology solutions. It is possible for small and medium courier companies to overcome many of these barriers by integrating two relatively new paradigms in ICT (information and communication technology) to develop a new service delivery model in which to do business. The evolution of e-commerce-type systems has been relatively rapid given the short time since the development of the Web. One of the emerging trends evident with Web 2.0 tools is that of communities. In particular, communities of consumers and businesses (Lemphers, 2007) coming together in a digital environment dedicated to a particular service. Additionally, by basing the new model on Web-services technologies, we can decrease the burden on existing systems by allowing transport companies to seamlessly integrate Web services' functionality into their enterprise software applications. By bringing together many smaller to medium transport companies in this way, more value-added services can be implemented through

the technologies with the cost spread between more players.

The suggested new service delivery model provides integration between transport companies through Internet technologies such as XML, SOAP, UDDI, WSIL, and Web services. In this way the transport companies can receive more opportunities to attract customers and improve the quality of services and therefore increase their profits. The architecture for the selected business model of the Web-system design is based on thorough requirements analysis and research of contemporary Internet technologies. The core of the system uses J2EE that is cross-platform, multiuser, object-oriented, and scalable; thus, the framework may be applied to various software and hardware environments. The XML Web-services mechanism allows the framework to integrate with external Web systems. It uses UDDI for delivery agents to reach their customers and partners with information about their services. Service description information is stored in WSIL format, so it can be distributed to any location using an XML document. SOAP is used for the XML data exchange mechanism between delivery agents, customers, and external Web systems. It provides users with remote calls to the Web system's functionality.

The aim of this research is to develop a framework for a new service delivery model that assists small and medium transport companies at providing their services through the Internet. The proposed model is for an advanced logistics B2B solution that integrates multiple transport companies and provides them with a unified Web interface to extend their business over the Internet. In the remainder of this article, a brief literature review is given followed by the proposed developed framework for the target model. A costing for the development of the model is then given, followed by the conclusions and opportunities for further research.

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