Chapter IX

Strategic Positioning of Location Applications for Geo-Business

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Abstract

The chapter presents several conceptual models, each of which can be used to improve our understanding of whether spatially enabled virtual business is appropriate or not. The first model, the Net-Enablement Business Innovation Cycle (NEBIC), modified from Wheeler (2002), consists of the steps of identifying appropriate net technologies, matching them with economic opportunities, executing business innovations internally, and taking the innovation to the external market. The process consumes time and resources, and depends on organizational learning feedback. The second model, modified from Choi et al. (1997), classifies geo-business applications in three dimensions, consisting of virtual products, processes and agents. Each dimension has three categories: physical, digital, and virtual. The chapter discusses examples of spatially enabled applications that fall into certain cells of this model. The model is helpful in seeing both the potential and limitations for net-enabled applications. The final model classifies spatially enabled applications by operational, managerial, and individual levels. Examples are given that demonstrate spatial applications at each level.
Introduction

Using “location” information as part of a firm’s competitive strategy to generate revenue, develop market share, extend services, and provide superior customer service is not a new idea. Decision makers have long used zip codes, census data, traffic flow patterns and the like to determine store locations, effect pricing, determine product mix, and the availability of services. Location or spatial components are critical factors that decision makers consider when approaching a problem or task. We should not be surprised that global positioning systems (GPSs) and digital mapping are being included as value-added information to a wide range of product and service offerings. Importantly, pervasive Information Technology (IT) and associated net-enabled architectures now provide the capability to share spatial information with business partners as well as offering customers similar access to location specific information. Firms must now strategize about new products and services inclusive of location information across the supply chain, not only to make better decisions, but also to provide location information as one more dimension of customer service.

Leveraging location to enhance firm profitability is a function of internal accelerators and external competitive pressures relative to a firm’s position in a market (Schuette, 2000). Firms must have strategic leadership, employee technological expertise and sufficient IT resource availability to integrate the necessary geographic information systems within current business processes. Equally important are the environmental conditions essential to successful implementation of location applications. Firms must also have the right internal structure to integrate location technology with business partners, market share to justify resource allocations, the ability to overcome entry barriers, relationships with strong suppliers and the ability to affect customer preferences. Thus, this chapter will focus on developing a Geo-Business Application Model useful in positioning e-business firms in deploying location specific applications.

First, we introduce Wheeler’s Net-Enabled Business Innovation Cycle (NEBIC), then develop, and present, the Geo-Business Application Model. We will conclude with a discussion of practitioner considerations of location technologies.

Net-Enablement Business Innovation Cycle (NEBIC)

Firms require a net-enabled strategy to assist them in leveraging information to support, enhance, differentiate, and substitute technology for physical processes (Straub et al., 2001). This would seem particularly true in dealing with digital location services that not only replicate physical location services but also enhance their capabilities by making them more efficient. Wheeler (2002) proposed the Net-Enabled Business Innovation Cycle (NEBIC) to measure, predict, and understand a firm’s ability to create value using digital networks. As shown in Figure 1, firms follow an ongoing cycle that begins by exploiting a firm’s dynamic capability to select and match IT to current economic opportunities, then reengines relevant business processes to exploit IT to achieve some new business innovation, and then continuously assesses customer value (Wheeler, 2002). Importantly, a firm’s unique capabilities allow them to make strategic changes in
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