E-PROCUREMENT AS AN INSTRUMENT FOR HOTEL SUPPLY CHAIN MANAGEMENT

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Abstract

The flow of goods, services, and information in the hotel industry, should be designed in a way that enables efficient transformation of raw materials into finished products or services with values. Procurement technology plays a vital role in the hotel business, because hotels usually purchase a large quantity of supplies for maintaining daily operations and quality. Today, a major goal of a hotel's supply chain management is to efficiently apply information technology to its procurement systems. Moving away from traditional offline purchase processing to online sequencing presents significant savings, improved productivity and enhanced operational efficiencies. Better communication between hotels and suppliers and support services may provide more favourable price offerings and related activities for the hotels customers. This article elaborates the e-procurement as a very useful instrument for the hotel supply chain management following the approach of Kothari et al.

Key words: e-procurement, supply, hotel supply chain management.

JEL classification: D21, D24, L86, M11.

1. INTRODUCTION

The use of technology has rapidly changed the hotel industry. E-procurement is a good example of the innovative use of technology in the hotel industry. E-procurement means purchasing goods and services over the Internet. Its further goal is to move the entire procurement process online, bringing operators together with their chosen distributors and enabling a streamlined and automated flow of the purchasing cycle. (Hearn and Gibbons, 2001, p. 3, 5)

E-procurement offers a great opportunity to reduce costs and contributes to the success of the hotel industry. Indeed, e-procurement technologies are not only an important management tool, but also an integral component of SCM for the lodging industry. Although for decades the reengineering of procurement has been attempted through various information technologies (e.g., telecommunications), the real opportunity for achieving this reengineering goal may lie in the use of e-procurement. This is particularly true in a stagnant economy. High revenue growth is often the major concern of corporate executives but such growth may not be always possible in a slow economic environment. Therefore,

the cost component, substantially impacted by an e-procurement strategy, may be the key to continue creating value in difficult circumstances. The classical value of e-procurement lies in reducing costs that goes directly to the bottom line which has a greater impact than increasing revenue (Kothari, Hu and Roehl, 2004, p. 2).

2. SUPPLY CHAIN MANAGEMENT

Supply Chain Management (SCM) is a term that has emerged in recent years. SCM emphasizes the logistics interactions that take place among the functions of marketing, logistics, and production within a firm and those interactions that take place between the legally separate firms within the product-flow channel. Opportunities for cost or customer service improvement are achieved through coordination and collaboration among the channel members.

In order to make a link between the supply chain management and the e-procurement, we should first define the supply chain management. There are a lot of definitions about supply chain management. For example, according to Handfield and Nichols (1999), the supply chain encompasses all activities associated with the flow and transformation of goods from the raw materials stage (extraction), through to the end user, as well as the associated information flows. Materials and information flow both up and down the supply chain. SCM is the integration of these activities, through improved supply chain relationships, to achieve a competitive advantage. (Handfield and Nichols, 1999, p. 2)

For the purpose of this article we can adopt the definition given by the Council for Supply Chain Management Professionals (CSCMP).[i] Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all Logistics Management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies.

Supply Chain Management is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model. It includes all of the Logistics

Management activities noted above, as well as manufacturing operations, and it drives coordination of processes and activities with and across marketing, sales, product design, finance and information technology. (http://www.cscmp.org/AboutCSCMP/Definitions/Definitions.asp, March 2006)

[i] CSCMP is the preeminent association for individuals involved in SCM. CSCMP was originally founded as the National Council of Physical Distribution Management (NCPDM) in January 1963. In 1985 it changed its name to the Council of Logistics Management (CLM) and in 2005 it became CSCMP.
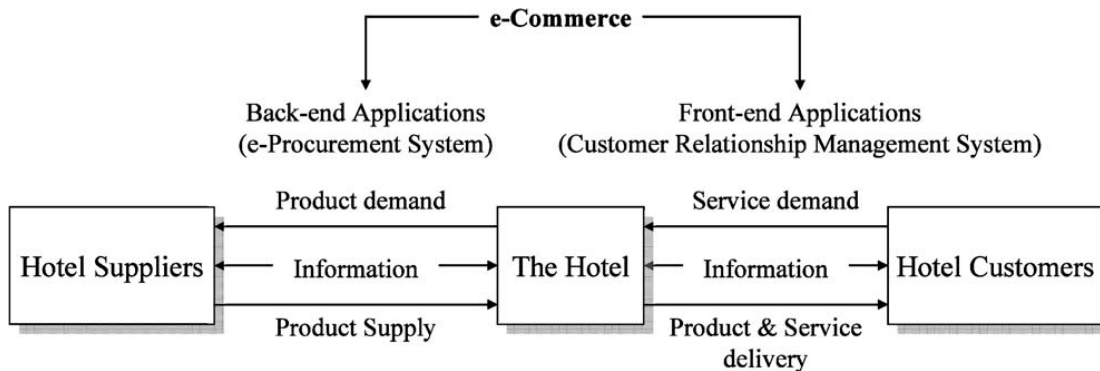
Figure 1. E-procurement and CRM as e-commerce tools for the hotel SCM (Kothari, Hu and Roehl, 2004, p. 4)

E-commerce offers enormous business opportunities to increase revenue while reducing operating costs. Figure 1 shows a complete e-commerce model for SCM which combines both the front end and back end systems.

3. E-PROCUREMENT

E-procurement is the processes making up the procurement operation that is done electronically and paper-free. The expressions "e-buying, e-purchasing and e-procurement" are sometimes used interchangeably, but e-procurement covers the entire operation of procurement and not just the buying process (e.g. approval process, shipping, etc.). E-procurement includes a company's requisitioning, purchasing, transportation, warehousing, and in-bound receiving processes. E-procurement is a multi-stage process that begins with user logging into a computer application and ending when the invoice for the products selected is paid.

The advantages of the e-procurement compared to the paper-based system are the following:

- All employees can participate in the purchasing process due to ease-of-use; self-service on the Internet. Corporate procurement capability is available to anyone with a web browser.

- A sharp reduction in order-processing costs and cycle times. The products and services ordered should be delivered faster because the process is more efficient.

- A company's e-procurement system can communicate to other application systems, rather than storing redundant data.

- It brings focus to the function of procurement and the importance of cost-saving.

- It attempts to limit maverick buying practices, for example buying office supplies with your corporate credit card at a local store-buying at a price that wasn't pre-negotiated. (Nevalainen, 2003, p. 61)

The key aspect of a company's e-procurement strategy is to better manage a firm's operational costs. Billions of dollars are wasted every year in efficient procurement practices. The bottom-line impact of margin improvement afforded by E-procurement is significant-especially when comparing this with revenue-focused activities.

The e-procurement process involves several activities described below. The purchasing department in the buyer's internal marketplace defines the scope of the products to buy and invites vendors to bid or negotiate prices. The agreed upon prices (contract prices) are stored in the buyer's internal electronic catalogue/ databases. The final buyer or end user can compare the various alternatives either on the electronic catalogue using the Internet or on the internal databases. An organizational purchasing decision would tightly follow the internal workflow management system where business and purchase rules are pre-defined. Supplier selection is extremely important in purchasing management to enhance quality, reduce delivery time, and minimize purchasing costs. The information on the internal

databases or the electronic catalogues can be updated manually using software agents. These systems not only allow end-users to order products and services online without intervention by the purchasing department, but also enable automatic fulfilment by

the supplier organization and payment via electronic funds transfer or purchasing (credit) cards. An illustration of this process is presented in Figure 2. (Kothari, Hu and Roehl, 2004, p. 6)
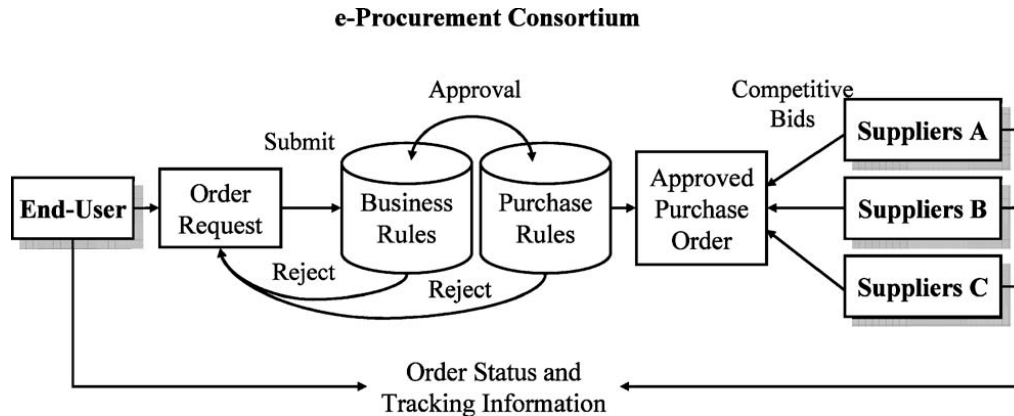

Figure 2. Purchasing process in the e-procurement consortium

By allowing business partners to electronically track and monitor orders and production activities, inventory management can be improved, and inventory levels as well as administrative expenses of inventory management at lodging operations can be minimized. Vendor Managed Inventory (VMI) can be considered as a component of the e-procurement process in the lodging industry. However, due to the seasonal nature of the lodging business, setting fixed inventories or par levels similar to the manufacturing business is not the most viable solution for the hotels. It appears that hotels could have VMIs for some of the items which are required all year round and do not fluctuate on the basis of occupancy rate at the hotels, for example, chemicals/cleaning supplies. Most guest-related supplies must be managed at the property level on the basis of the demand during a particular season. Hence, VMI is not a complete solution, specifically due to the seasonal nature of the hotel business. E-procurement can be operated under different modes (marketplaces). Many-to-many mode is often referred to as a public e-marketplace or exchange. (Turban et al., 2002, p. 217) In contrast, conducting electronic commerce in the one-to-many mode is often called a private e-marketplace. Hotels can incorporate this model and create an exchange market for their own brands, helping mobilization of resources within the organization.

Vertical marketplaces are those that deal with one industry or industry segment and are usually sponsored or at least supported, by one or several leading companies in the area. Horizontal marketplaces are those that concentrate on a service or a product used in all types of industries. Companies such as Ariba and CommerceOne are in fact not only software providers but also horizontal exchanges,

providing a trading community for a broad spectrum of suppliers of all types of direct and indirect materials, regardless of vertical industry.(Kothari, Hu and Roehl, 2004, p. 8)

There are two possibilities in terms of purchasing (sourcing) strategies: (1) spot/ competitive sourcing where purchasing is made as the need arises and (2) systematic/ strategic sourcing that deals with long-range supplier–buyer relationships. The latter is considered a better strategy than the former. The prices are dynamic and uncertain in spot sourcing where the market makers match supply and demand in their exchanges. On the other hand, pricing is more predictable in systematic sourcing because the market makers usually provide the framework for negotiated prices and terms between buyers and sellers. In this setting, collaborative commerce among members of the supply chain can be achieved in many areas ranging from product design to demand forecasting. This results in shorter cycle times (same day, even same hour) for delivery, minimal delays and work interruptions, fewer inventories, and lower administrative costs. By using the Internet to process basic accounting such as purchase orders, invoices, and payments as opposed to using traditional manual processes, average transaction costs can be reduced from around $1 to 10 cents.(Marston and Baisch, 2001)

The e-procurement software system available in the market not only supports upstream supply chain operations (e.g., placing orders with suppliers) that deal with activities of the internal supply chain, such as production scheduling, inventory control, and costing but also facilitates downstream activities, such as sales, delivery scheduling, and customer billing.(Turban et al., 2002, p. 655) The software sometimes

include built-in analytical tools to automate the evaluation of suppliers on criteria such as product quality, performance, reliability, price, and monitor internal compliance with procurement policy, all without having to manually create and run reports.

The SCM and procurement literature often suggests many benefits of e-procurement. These potential benefits are so significant that e-procurement has turned the formerly looked-down-upon traditional purchasing function into a competitive weapon. For the hospitality industry to gather better efficiencies from its operations and to lower the cost of doing business, it is first necessary to understand the business process that needs to be automated and the exact areas that are being automated.(Kothari, Hu and Roehl, 2004, p. 8)

4. E-PROCUREMENT AS AN INTEGRAL COMPONENT OF SCM

Procurement management refers to the coordination of all activities pertaining to purchasing goods and services necessary to accomplish the mission of an enterprise. Purchasing life cycle for a product or service involves seven stages of purchasing activities that include information gathering, supplier contact, background review, negotiation, fulfilment, consumption, maintenance and disposal and renewal. (Archer and Yuan, 2000) The traditional role of procurement management is to ensure enough supply of parts and materials to support business operations and save money in the process. Approximately 80% of an organization's purchased items, mostly maintenance, repair and operations (MROs) constitute 20% of the total purchase value.(Turban et al., 2002, p. 232) Non-value added activities such as data entry, correcting errors in paperwork, expediting delivery, or solving quality problems for the MRO purchases result in insufficient time for corporate buyers to pay full attention on the procurement of high-value or high-volume direct materials.(Kothari, Hu and Roehl, 2004, p. 5)

A study conducted by Radstaak and Ketelaar (1998) suggests that e-commerce purchasing enhances supply chain efficiency by providing real-time information about product availability, inventory level, shipment status, and product requirements. With the buying process typically involving a large amount of information processing and communication, Gebauer et al. (1998) also postulated that procurement is well suited to information technology support and automation throughout all its steps. E-procurement is an integral component of an organization's supplier relationship management strategy, and often is the first major step towards trading partner collaboration, aimed at translating the strategy into successful execution. However, many companies today in the lodging industry may be still unfamiliar with e-

procurement and we can say that this technology is still in its infancy in the hotel industry.

E-procurement has been evolving to the point where the objective is to reward businesses on a low-cost, not low-price basis. By automating and streamlining the laborious routines of the purchasing function, purchasing professionals can focus more on strategic purchasing and corporate goal achievements. The goal of e-procurement is not to make a supplier drop its prices or lower its margins but to achieve the savings mostly generated in material and administration costs. This also implies that the practice of e-procurement is always looking at the lowest total cost not just the lowest cost of a particular area. The potential of these savings can be realized by both buyers and sellers.

5. CONCLUSIONS

Today, a major goal of a hotel's supply chain management is to efficiently apply information technology to its procurement systems. Moving away from traditional offline purchase processing to online sequencing presents significant savings, improved productivity and enhanced operational efficiencies. Better communication between hotels and suppliers and support services may provide more favourable price offerings and related activities for the hotels customers.

In summing up the future of e-procurement Gebauer et al. (1998) and Gebauer and Segev (2001) believe that information technology will support or even automate all different kinds of procurement procedures across entire organizations by routing technical specifications, approval forms and payment instructions according to internal policy constraints, external requirements, and market opportunities. The fragmented nature of the hospitality industry creates inefficiency in the purchasing process that generates a need for embracing hospitality e-procurement exchanges. The lodging industry in particular is a good candidate for adopting e-procurement systems because of its complex purchasing procedures required to deal with large quantity and various quality purchases of consumables on a regular basis.

The seemingly high switching costs of converting from offline purchasing to e-procurement can be rewarded in the form of reduced transaction processing costs, increased end-user involvement in procurement transactions, and more effective purchasing decisions. Improved end-user employee access will reduce the need for human intervention by purchasing agents and other support personnel.

Regardless of the current purchasing strategy of a company, the overall consensus is that e-procurement technologies will become an important management tool to enhance the performance of supply chains. Although e-procurement is still very much in its infancy in the lodging industry, one may

expect to see a rapid increase in its functionality that will assist both buyers and suppliers in the electronic environments over the next few years. The benefits are expected to accelerate the adoption rate of these technologies once remaining uncertainties are reduced to a level that encourages significant resource commitments.

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