Chapter 6.7
Improving Supply Chain Performance through the Implementation of Process Related Knowledge Transfer Mechanisms

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ABSTRACT

With the complexity of organizations increasing, it is becoming vitally important that organizations understand how knowledge is created and shared around their core business processes. However, many organizations deploy technology without due consideration for how their employees access, create, and share information and knowledge. This article explores the subject empirically through the study of how employees work with information and knowledge around a core business function—in this case a supply chain process. In order to do this, the organization needs to be viewed from a network perspective as it relates to specific business processes. Viewing the organization in this way enabled the author to see how employees' preferred knowledge and information transfer mechanisms varied across the core process. In some cases, the identified transfer mechanisms where at odds with the prescribed organization wide mechanisms. However, when the organization considered the employees' preferred transfer mechanisms as part of an overall process improvement, the E2E supply chain performance was seen to improve significantly.

INTRODUCTION

Organizations are waking up to the fact that the supply chain is not simply a support function for its business, but is in fact the key capability against which a competitive advantage can be developed (Kulp, Ofek, & Whitaker, 2003). An organization's supply chain capability is now regarded as a key contributor to any organization striving to maximise competitive advantage (Toyer, 1995), and no longer is the "supply chain" simply the preserve of procurement, logistic, or manufacturing specialists (Porter & Millar, 1985).

As organizations start to compete within global market places, the complexity of their supply chains increase significantly. In order to address and manage the increased complexity many organizations look to enterprise "supply chain" software solutions to ensure a smooth scalable supply chain operation. This was the case with IBM's Integrated Supply Chain (ISC) operation in their Europe, Middle East, and Africa (EMEA) region. Recent strategy initiatives had seen manufacturing and distribution for PC products handed over to third party providers. As part of the partnership agreement the manufacturing and logistics partners shared or had access to IBM data feeds thus enabling a continuous data flow from the IBM handled fulfilment front end through to the third party distribution engine. The data flowed; however, end-to-end performance began to deteriorate significantly. Whilst developing a recovery plan, the organization identified the fact that the performance issues were down to a failure to understand how employees, situated in different parts of the supply chain accessed, created, and shared information and knowledge (McLaughlin, Paton, & Macbeth, 2006). What this article will do is show how knowledge and information had to be accessed, created, and shared, and how the recovery plan, by focusing on the identified preferred knowledge and information needs at different points across the supply chain, was able to drive significant end-to-end core process improvements.

Before proceeding it is important that the difference between "information" and "knowledge" as terms of reference are clearly defined in the context of this research. Although many authors and academics use the terms information and knowledge as though they are interchangeable (Fuller, 2001; Tsoukas, 2005), there is a subtle but significant difference between the two. This in effect has reduced the significance of knowledge, often reducing it to merely information, and thus the qualities of knowledge, as a classic philosophical concept are lost. In order to try to distinguish between information and knowledge, Fuller (2001) looks at the original meaning of information. "Information" was derived, during the Middle Ages, from a Latin word used to describe the process by which documents were transferred, or communicated, from one entity to another. As for "knowledge," this was the mind's representation of this process, which in turn was usually understood in relatively passive terms. Knowledge, in effect, was the result of the minds receptiveness to what lies outside it. So, in the context of this problem facing IBM, and for clarity in this article, the author will define information and knowledge as follows:

- **Information:** This is taken to mean codified data. Data that is captured and shared via hard-copy or electronic documentation, which in turn may be stored in databases or spreadsheets, or in report form.
- **Knowledge:** Simons (1945) found that according to his model humans act as information processing systems that extract "meaning structures" from information inputs through sensory organs, and store these meaning structures as new knowledge. Simons (1945) viewed that information only becomes knowledge within the context of the human mind is supported by Davenport and Prusak (1998), Fuller (2001), Von Hayek (1952), and Polanyi (1962). Accepting that knowledge creation and use is dependant on human interaction within an organization or process, Davenport and Prusak (1998) provide the most commonly accepted definition of knowledge within organizational and business research.

Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a frame work for evaluating and incorporating new experiences and information. (Davenport & Prusak, 1998)