New Technology and Unintended Consequences - (Part 1)
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Until the late in the 20th Century, the work of warehousing and the supply chain were generally considered secondary elements of business operations and success, tactical and not strategic, and outside the focus of professional business management. Management focus included sales, finance, accounting, marketing, human resources and manufacturing, but not warehousing and the supply chain. These were considered necessary, but not terribly important or difficult to manage, and were certainly not where to invest limited resources. Clearly the situation has changed.

Warehouses have grown to become large distribution centers, manufacturing has been moved off-shore, business competition has increased, and management has come to recognize that survival requires the investment of time, energy, and money to optimize performance of their warehouse space, equipment, people, and their supply chain. This expansion of management focus and attention has brought along the development and use of a wide range of new technologies including expensive and complex computer software with which to improve performance of all the resources.

The objective and the ROI justification for new technology investments (including software) in the supply chain are normally based on the belief that we will be able to handle more materials, more quickly, with higher quality, safely, with reduced costs and with fewer people. These systems have been widely installed, across most industries, by competent people, and yet, I am beginning to notice that often those outcomes are not being achieved.

A few years ago, a client who had purchased and installed a new software application to help improve purchasing and inventory control called to talk about their problem. After spending a lot of money and time, senior management, who had approved the software investment could not understand why performance had not improved. More recently, a similar question was asked in a company that had installed a new, top of the line, Warehouse Management System, and their warehouse productivity and throughput performance had actually deteriorated. In both instances, I was asked to study the situation and recommend a course of action that could lead them to their desired results.
In those projects we discovered three interesting elements that contributed to their situations. Since then, in my conversations with senior managers in other companies, I am discovering these unsatisfactory results and occasionally failures are happening much more often than I had ever imagined, and certainly much more than is reported in the press.

The first issue we discovered was that the consulting support for the implementation of the new system had been primarily focused on the technical dimensions of the system and installation, and not the business operation. This is consistent with the relatively new focus on Systems Integration. For both projects there had not been a strong effort to help operations management understand where the opportunities were to improve the operations performance, how the software could help, to teach management how to use the software to plan and organize the workload differently, to manage the work flow, to use the new data to understand the dynamics of work more deeply, or to implement new methods to perform the work, so that ultimately the software could be configured or reconfigured to support achieving higher levels of performance. Instead the training focus was on how to enter data and configure and read outputs. Consequently, in both instances, the software had been configured to support operations without changing any significant business work methods or procedures. The result was that in both instances, the new software took more time than expected to process the data, the work itself was not being performed better, faster, with higher quality, or more productively and in one site the throughput capacity was less than before the implementation of the new system. The focus of the project had primarily been to integrate the technology and not to integrate the technology into the business.

The second issue was senior managements’ expectations and how operations management was managing. The first indication was noticing the quality and pace of the people and the work, and the condition of the facility. In both work settings there were no performance measurements - at the group or individual level. Tardiness, absence, substance abuse, minimal security, unequal treatment of employees, and other behaviors were all visible. After some discussion with senior management in both companies it became clear that they had expected that the process of justification, the investment, and implementation was all that would be needed to achieve their goals. Consequently, nothing else in the operation had changed. Clearly, senior management had developed expectations for change that the new software could not deliver. Management expected that the new system was all that was needed to achieve the higher performance objectives and operations management had not taken the opportunity to change anything as well.
Understanding the first two dimensions led us to discover the third element. With the implementation of the new systems, it became clear that the entire operating department (managers, supervisors, and staff) were not individually prepared to make the best use of the new systems. To achieve the improved performance required new skills, new ways of thinking, new relationships, new information to communicate, and a new sense of their role and responsibility to each other in the operations, to know at every level that their prior performance was no longer enough.

Many of the managers and staff had been hired and promoted based on qualities that were no longer sufficient and in some ways were no longer needed in the current job requirements. Good people skills and a strong work ethic were still important. But now, managers and supervisors needed to be able to perform the more challenging elements of management like planning and organizing the daily work load, developing new and better ways to do the work, and understanding and responding to the business and operations needs of vendors, carriers, customers and the other stakeholders in the supply chain using the new systems to manage the flow of materials differently each day. New systems require new skills and a change in roles.

The decision to purchase a new information system will impact many dimensions of your business that are not directly obvious. If you would like to talk about this further, you can reach me at Don@warehousecoach.com.