Chapter 8.5
New Profession Development:
The Case for the Business Process Engineer

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ABSTRACT

Adding engineering discipline to defining and managing the operation of business processes has become a truism although results of practical application have been mixed. This chapter argues that an obstacle to business process (re)engineering is the lack of a business process engineer role with an associated professional education, tools, and community. The main argument derives from an analysis of the domain structure for system design and comparison with existing practices in manufacturing engineering. We observe that: (1) At present there does not exist a profession of business process engineers. Their role in a firm is filled, on an ad-hoc basis, by business line personnel, information technology analysts or architects, and/or management consultants; (2) There is an increasingly critical need to master the subject of business process engineering for an individual firm as well as the general U.S. industry; (3) Other professionals, while having their own specialized skills valuable to a firm, do not necessarily have the optimal skill set for business process engineering. We therefore conclude that there is an urgent need for a professional business process engineer.

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We discuss the skills required of this profession and briefly describe a first course offered at a university on this subject. We propose that academic institutions should seriously consider such a new program today.

1. INTRODUCTION AND PRELIMINARIES

It would be reasonable to assume that business transformation, process redesign or reengineering, an area much talked about by industry and academia, and practiced by a wide gamut of industries for more than a decade, is a fairly well defined academic and/or professional discipline. Our careful examination of this area indicates that this is not the case. In this paper, we argue for the need of such a discipline, which should be practised by a business process engineer (BPE). The success of the profession and ultimately, the business enterprises it serves depends on associated professional community, education, and standards.

1.1 Historical Background

The goal of every enterprise is profitable, efficient, and effective delivery of valuable products and services to a customer. Since the industrial revolution, the complexity of accomplishing this goal has increased through regular cycles of technological innovation followed by adaptive business restructuring to effectively capture new value. Enterprises have moved from basic production, to transporting goods to remote markets, to managing corporations of a national or international scale [Perez, 2002]. In the present "information age" cycle, information processing, communication and storage technologies shift the focus of innovation from task-oriented productivity to system responsiveness. Recognition of time as a competitive differentiator (see e.g., Blackburn [1990]) and the more recent focus on globalization are driving a dramatic increase in coordination and coherence across worldwide systems. Finding means to cope with the increased complexity is essential to the core enterprise goal.

Simple automation of existing coordination structures is not sufficient. In manufacturing, digital processing has recapitulated the technological evolution since the industrial revolution. In manufacturing, the first wave of computerization focused on factory automation but often failed to deliver the expected cost saving. Postmortem studies revealed that even locally effective automation addressed only about 5% of factory cost structure. Addressing the remaining 95% drove a new engineering discipline focused on coordinating manufacturing processes and supply chain management utilizing the basic, physical production steps. Recognizing cross-functional business processes (see, e.g., Davenport and Short [1990]), we came to realize that a set of related tasks in different functional areas - say, sales, purchasing, design, manufacturing, and distribution - had to be treated collectively. The focus again was placed on automating activities, but this time across functional areas, within large "turn-key" enterprise resource planning (ERP) systems.

The pattern of business automation is not dissimilar to that of the first wave of factory automation with a focus on automated tools for individual activities. Results similar to that of factory automation occurred for similar reasons [Davenport, 1998]. However, we cannot expect information technology (IT) to compensate for the inadequacies of a business process design. Automating an unproductive task will consume unnecessary resources even faster. On the other hand, automating a well designed process could provide additional yet critical benefits of time reduction for the overall process. When time delays cannot be eliminated or reduced through process design (such as in a step of physically transforming materials), automation is our last resort.

In this chapter we observe that the sequence of activities in business process design and engineer-