

Chapter XV

Managing Operational Business Processes with Web-Based Information Technologies

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ABSTRACT

Traditionally management schools of thought that emphasize certain types of work structures usually appear earlier than information technologies (IT) geared at supporting those work structures. This situation has undoubtedly changed recently, arguably around the mid-1990s, with the explosion in the commercial use of the Internet and particularly the Web. This calls for the development of a generic framework that ties together relevant management ideas that help organizations strategically and operationally align themselves with new Web-based IT. Our goal with this chapter is to provide some basic elements that can be used by managers and researchers as a starting point to develop this generic framework. As such, we focus on a particular set of activities associated with team coordination and communication in production and service delivery business processes through the Internet and the Web.

INTRODUCTION

Traditionally, management thinking has preceded and quite possibly driven the adoption and use of information technologies (IT) in organizations. That is, management schools (of thought) that emphasize certain types of work structures usually

appear earlier than IT geared at supporting those work structures. This situation has undoubtedly changed recently, arguably around the mid-1990s, with the explosion in the commercial use of the Internet and particularly the Web. The emergence of e-commerce, e-trade, e-business, and other e-'s has clearly led to creation of new organiza-

tional forms, management challenges, and related management ideas (see, e.g., Kock, 2008). For example, the Web has led to the development or expansion of:

- “Internet startups”, whose market value vastly exceeds what traditional price/earnings standards for company market valuation stipulate, placing these companies in an advantageous competitive position right at their inception due to the initial amount of capital that is available to them.
- “Internet portals”, whose market value depends much more heavily on the number of visitors (first time or repeat) they can draw than on their revenues, profitability or other traditional market value measures.
- “Virtual organizations”, which operate with no or little of physical assets and distribution channels.
- “Boundaryless organizations”, in which geographical barriers to teamwork and market reach are virtually eliminated.

The examples above only scratch the surface as far as the potential that this “disruptive technology” which is the Internet can have on organizational structure and, in consequence, management thinking. The adoption of management ideas that are aligned with the collaboration potential afforded by the Internet and the Web can place companies in tremendously advantageous positions in their industries, at least at a certain point in the evolution as organizational entities, as illustrated by Dell Computer, Federal Express, E-Trade and Amazon.com. The reasons for this are many, and range from the capacity to benefit from lower barriers to new entrants, to the ability to attract large infusions of capital at the beginning of their life cycle, to the development and continuous use of highly streamlined distribution and workflow management processes.

NEW ORGANIZATIONAL MODELS SUPPORTED BY THE WEB AND KEY MANAGEMENT SCHOOLS OF THE 1900s

At the time of writing, the type of management thinking discussed above was not well defined and shaped in the form of a single management school. Nevertheless, it has been easy to find organizations trying to adapt ideas from old and existing management schools to the new environment of Web-based IT. Table 1 summarizes key management schools that emerged in the late 1900s, before the use of the Web became widespread.

Trying to adapt ideas from old and existing management schools (such as those in Table 1) to the new environment of Web-based IT has its advantages, but is difficult to implement in practice. There are two key reasons for this. The first is that some of the new Web-based IT have emerged to support new organizational forms that are often incompatible with one single management school. The second reason is that existing management schools usually propose ideas that are, at some level, contradictory, often because they were developed on the premise that other management schools proposed ideas that did not work in practice (e.g., reengineering vs. total quality management). Moreover, given the tendency of business writers to focus on one or a few business ideas and propose them as a panacea, it is difficult to find a good match between single existing management schools and emerging Web-based IT. What is needed is a generic framework that ties together relevant management ideas that help organizations strategically and operationally align themselves with new Web-based IT.

It is beyond the scope of this chapter to propose a new management school. Even “describing” in the detail a new management school would increase the length of this discussion beyond what is expected from a chapter. Given this, a first step towards a new management framework to help organizations benefit from modern Web-based

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