

Chapter 8.1

Emerging Trends in Outsourcing

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ABSTRACT

Outsourcing has been conventionally viewed as a solution to generate quick profits and provide business continuity. The previous decades have seen the emergence of the Information Age, where the key focus was on knowledge acquisition and application. We are now progressing towards the era that revolves around “concept” development from an era that was information-dependent. This age, referred to as the Conceptual Age, will be dominated by six new senses: Design, Story, Symphony, Empathy, Play and Meaning; and shall focus on the human resource development aspects. This creates a need to diverge from the current reliance on linear and sequential algorithmic practices in outsourcing and to adopt cognition based engineering and management approaches. This chapter lays the founda-

tion for Offshore Engineering and Management (OEM) and discusses estimation issues in OEM that have their roots in software engineering. Also, this chapter identifies the limitations of the current methodologies from an outsourcing point of view, and delineates how they can be deployed effectively for an outsourced environment.

INTRODUCTION

Professional outsourcing relies greatly on the attitude, innovation, and creative instincts of the taskforce involved. Pink (Pink, 2005) highlights the transformation of the society from the Information Age to the Conceptual Age from the psychological point of view. Left-brain thinking dominated the developments in the information age that focused on logical and precise analysis. However, with the globalization and increased economic uncertainties,

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the right-brain abilities like context, synthesis and emotional expressions have gained significant attentions for survival in competitive environment. While Design, Play and Meaning will be the focus of corporate outsourcing; the Story, Symphony and Empathy will be the potential areas of *personal offshoring* (Gamerman, 2007). The development of the working components of the six parameters of conceptual age, is suggested through cultivating the skill set and education (Johnson, 2006). Corporate outsourcing will be driven by the potentials of conceptual components in creating new economic opportunities. Therefore, the need for reorienting education has been justified for future success (Greespan, 2004). The criteria for economic success and increased productivity have been pivoted around creativity, artistry, cultural and technical experience. Over-supply, outsourcing, and automation have been thought as new parameters in the evolving state of economy (Wikipedia, 2007). The future corporate outsourcing will include CAD/CAM, and cognitive robotics from engineering and manufacturing sector. Also, health care, transportation logistics, entertainment media processing, and packaging and courier services oriented activities will be on rise, as new e-Services areas for outsourcing.

From the outsourcing perspective, software-intensive systems will play a significant role in a variety of projects, creating the need for a new strategy to improve the dependability and trustworthiness of the software. This motivates the creation of Offshore Engineering and Management (OEM) as an emerging discipline. The primary forces driving the emerging OEM trends are as follows:

- (i) The competition between the left-brain and the right brain will pose new problems of demands, supply, and satisfaction in the conceptual age (Pink, 2005). This will lead to greater emphasis on cognitive aspects of information processing and less dependence on routine conventional data processing areas

as manifested in the outsourcing activities of the current decade, like call centers, medical transcriptions, and claims processing.

- (ii) Personal offshoring will boost the e-Service sector to meet the demand for new variant of products and services. Corporate outsourcing will be directed towards mass scale and bulk capacity products through reorientation of knowledge workers (Lumb, 2007). Service organizations, as well as production and engineering departments, can no longer determine the rate of new product introduction (Lumb, 2007). The production capacity has to be flexible in order to meet the demand for new variants of products and services that will be released at an increasing frequency. This trend is imposed by the era of abundance and is needed for co-existence and economic survival of SMEs and corporate houses, leading to increased reliance on outsourcing. The increased pressure on the search for alternative designs can be partially reduced by resorting to outsourcing.
- (iii) The phenomenon of software aging is important in the context of cognitive support for outsourcing in the conceptual age. The detection of the onset of software aging can help to prevent dynamic failure events. Multivariate State Estimation Techniques (MSET) have been investigated for real-time proactive detection of software engineering mechanisms in operating environments involving multiple CPU servers (Gross et al, 2002)

OFFSHORE ENGINEERING AND MANAGEMENT (OEM)

OEM proposes the systematic and structured application of scientific, engineering, and management principles, through the use of proactive software engineering and information technology approaches, in the business process outsourcing

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