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Business process reengineering: an approach for process mapping

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Abstract

The goal of business process reengineering (BPR) is to achieve dramatic improvements in business measures of performance by radically changing the process design. This paper provides a structural definition of the redesign search space using the number of employee types and the number of activities. A systematic approach that combines some linear programming tools with unique BPR principles is then proposed to support the technical redesign of the current process. The approach is illustrated using a public firm process. © 1999 Elsevier Science Ltd. All rights reserved.

Keywords: Business process reengineering; OR; Process mapping; Case example

1. Introduction

Business process reengineering (BPR) is the “fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed” [1, p. 32].

Developing a radical design is a twofold challenge; a sociocultural challenge and a technical challenge [2, p. 132–92]. The sociocultural challenge results from the severity of organizational changes that typically accompany successful implementation of BPR projects [3]; they include changing the work unit from departments and functions to process teams, the work scope from functional or departmental to cross-functional, the job from simple tasks to multidimensional work, the people role from controlled to empowered, the job

preparation focus from training only to training and education, the reward system from activity-based to result-based and the organization structure from hierarchical to flat [1, p. 65–82].

The technical challenge is due to the difficulty of developing a process design that differs radically from the current design. There are ground rules for developing radical designs; e.g. start from a clean slate, take a fresh look, start from scratch, start all over, abandon outdated rules, question fundamental assumptions, ask basic questions, think outside the box, design with no prior constraints, redesign where there are no sacred cows and investigate new paradigms. More specific redesign guidelines are: minimize process decomposition, consolidate activities, allow employees who process the job to deliver it as well, redesign for single-source data entry and redesign for common databases that are remotely accessed through networking [4].

At the level of the process design structure (i.e. process map), however, the most widely used technique is observational analysis (OA). The OA technique, which

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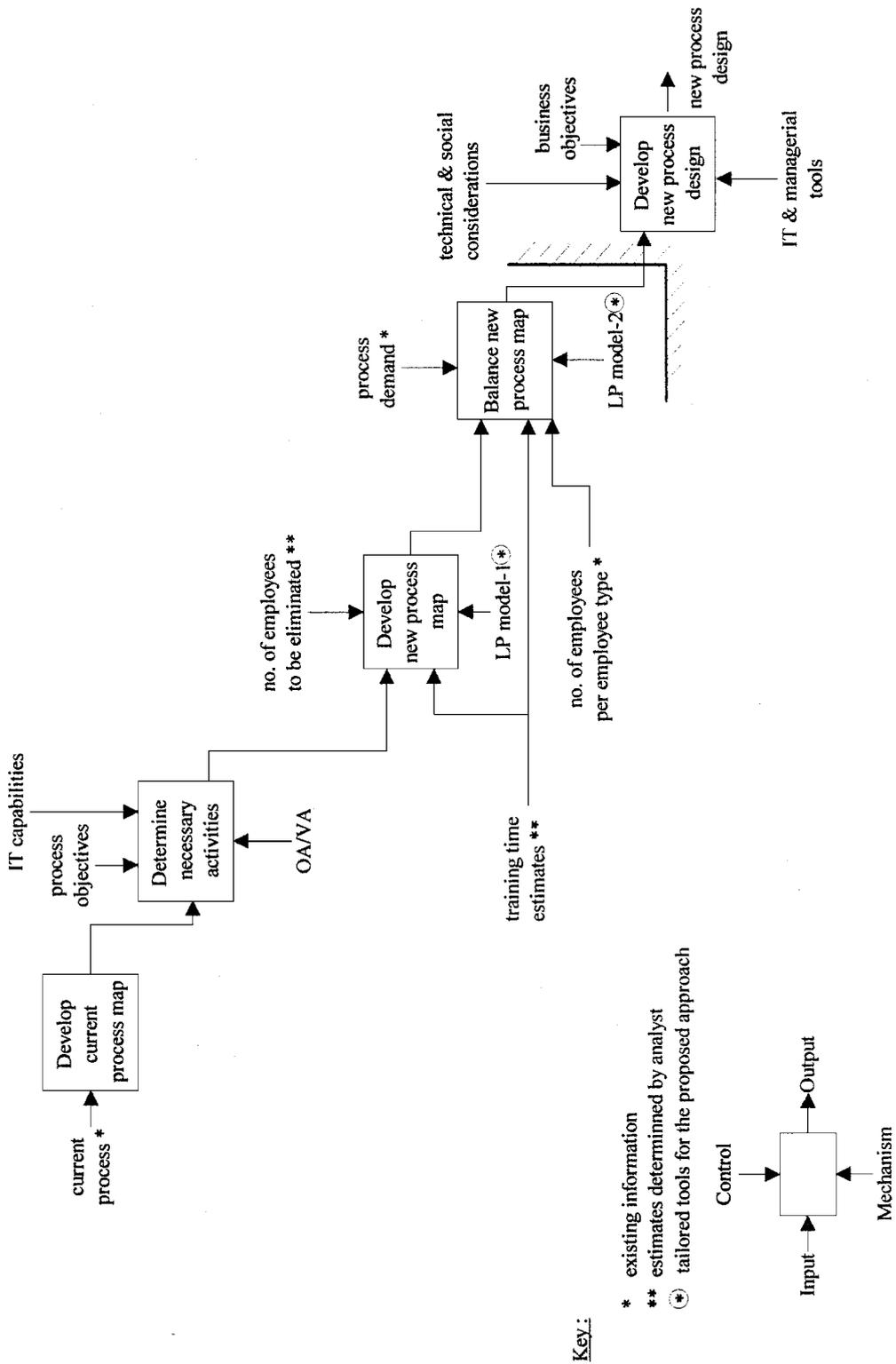


Fig. 1. An IDEF0 model of the proposed approach for process mapping.

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