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Taking operations strategy into practice: Developing a process for defining priorities and performance measures

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ABSTRACT

Enterprises' operations systems and environments, characterized by their complexity and dynamics, are challenging operations strategic management models. The study presented in this paper develops a process to integrate operations strategy content to operations performance measurement system design. Essentially, the developed methodology is based on Process Approach (Cambridge Approach) technique that systematizes procedures for generating a performance measures set coherent to operations strategy objectives and also produces a consistent strategy implementation process. To illustrate the development and the application of the proposed design methodology, findings of two case studies related to telecom engineering services companies are used. Results are discussed focusing on testing the proposed methodology in terms of its feasibility, usability, and utility. A refined process, organized in phases, steps, and procedures, is the final result of the presented study.

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1. Introduction

Enterprises' operations systems and environments, characterized by their complexity and dynamics, are challenging operations strategic management models. New operations systems design requirements are compelling companies to engage in a broad and in-depth change process. The operations system (re)design covers organizational and management processes; particularly, organizations are paying closer attention to the changing nature of operations systems performance. Actually, in operations strategic management systems context, performance measurement subsystems, processes, and measures used to assess enterprises performance are the main focus of (re)design projects (Brown and Fai, 2006; Neely et al., 2005; Gomes et al., 2004; Munive-Hernandez et al., 2004; Kaplan and Norton, 1992).

Enterprises are promoting several changes in their business systems and processes in order to develop a more integrated and responsive operation (Henry, 2006; Chen, 2005). Some of the redesign initiatives are being conducted in the strategic domain, oriented to develop a strategic fit between operations strategy, represented by their decision areas and performance dimensions, and production planning systems (Díaz Garrido et al., 2007; Olhager and Selldin, 2007; Olhager and Rudberg, 2002). These initiatives also deal with the alignment between operations, manufacturing, or service strategies and competitive strategies, using business performance as its measure (Amoako-Gyampah and Acquah, 2008; Brown et al., 2007; Acur and Bititci, 2004; Melnyk et al., 2004; Pun, 2004; Joshi et al., 2003).

These strategic design initiatives are the main context of the presented paper and guide the whole research design. The main objective of this paper is related to operations strategic management system design, and contributes to a better understanding of operations strategy design, implementation, use, and review. Particularly, it shows how to generate action plans based on

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operations strategy specifications, and building on these plans, to design a performance measures set.

This paper shows a design methodology development process whose main purpose is to create an operational procedure to review the operations strategic management system. The main orientation of this research is based on Neely et al. (2005) propositions related to individual, systemic, and environmental aspects. When associated to individual performance measures it could address the question 'How can one ensure that the management loop is closed—that corrective action follows measurement?' When approaching the performance measurement system as an entity, it contributes to the understanding of what are the 'definitive' principles of performance measurement system design; and to identify what techniques managers can use to reduce their list of 'possible' measures to a meaningful set. Studying issues associated with the system and its environment brings in questions like 'Why do firms fail to integrate their performance measures into their strategic control systems?' and 'How can we ensure that the performance measurement system matches the firm's strategy and culture?'

It is assumed that the strategic management system, in its performance measurement aspect, is conceived to deploy enterprise strategic performance management instead of performance measurement by itself; develop dynamic rather than static strategic management systems; enhance performance measurement systems flexibility, and improve their capability to cope with organizational changes (Neely, 2005).

It is important to point out that the performance measurement system is an 'amalgam' that integrates the strategic management system, and guarantees the development of its continuous improvement and learning processes (Neely, 2005; Folan and Browne, 2005).

The strategic management system organizes its main function through a set of subsystems: strategic and planning subsystems and a performance measurement subsystem. This system is the object of analysis; the design process, and the approach used to conceive, to manage, and to operationalize its design task is based on the Process (Cambridge) Approach developed by Platts (1993). The design process is presented in its entire set of phases and activities and information from two telecom engineering services companies' case studies is used to illustrate its application. The main focus of this paper is the study of action plans formulation and their required performance measures.

2. Operations strategic management system

This section shows the concepts in building the operations strategic management system—OSMS—theoretical framework. This theoretical construction is used as a structural framework that guides the procedural framework development (Folan and Browne, 2005).

2.1. Strategic management systems

The management logic of a strategic control system was developed in early times, when performance mea-

surement systems were introduced. The measurement system is a part of a wider system, which includes goals setting, feedback, and reward functions (Neely et al., 2005).

It is important to formally declare some theoretical assumptions that support the operations strategic management system design:

- Mintzberg (1978) arguments that only through a consistent pattern of actions, a strategy could be identified. In fact, the strategy exists only if it is realized. It is assumed that there is an interplay between actions' results and their consistency that is established over time; the performance measurement system could mediate that interaction.
- According to Neely et al. (2005), performance measurement is the process of quantifying the efficiency and effectiveness of action. A performance measurement system is the set of metrics used to quantify both efficiency and effectiveness of actions. Central to these definitions is that action leads to performance and that there are internal and external factors that affect the efficiency and effectiveness of this relationship.
- Performance measurement systems should be designed, implemented, and managed as part of a strategic management system. The measures should be derived from strategy and should provide consistency for decision making and action. Particularly, the operations function will be managed in terms of its own strategic management system (Díaz Garrido et al., 2007; Neely et al., 2005; Olhager and Rudberg, 2002; Skinner, 1969).
- Strategic management control systems should be used as a means to provide surveillance, motivation, monitoring performance, stimulating learning, sending signals, anticipating events, introducing constraints, and managing scenarios to the operations system. It is important to realize that the control function is being defined by exploring complementary features of mechanic and organic behaviour, i.e. not only reacting and tracking strategy, but also reviewing system design (Yeung et al., 2007; Henry, 2006; Neely et al., 2005).
- Performance measurement systems should be able to manage the determinants and results of operations systems outputs, exploring the causalities between them and developing a predictive approach for the whole operations strategic management system (Tan and Platts, 2007; Lu and Botha, 2006; Tan and Platts, 2005; Kaplan and Norton, 1992; Fitzgerald et al., 1991; Keegan et al., 1989).

The present reality that organizations and their managers are facing in their operations strategic management systems, are forcing them to review their assumptions on how to manage operations system performance. An integrated approach based on computational systems—the integrated enterprise—associated with the proliferation of total quality management and lean manufacturing practices are creating real conditions for integrated performance measurement system implementation (Gomes et al., 2004).

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