SYSTEMS ANALYSIS AND MANAGEMENT DECISIONMAKING

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9781760577230

Systems analysis and management decisionmaking by Leon S. White

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

www.triestepublishing.com

LEON S. WHITE

SYSTEMS ANALYSIS AND MANAGEMENT DECISIONMAKING

Trieste

SYSTEMS ANALYSIS AND MANAGEMENT DECISIONMAKING *+

by

Leon S. White

I. Introduction

The purpose of this paper is to describe the elements of systems analysis and relate these elements to what Simon [13] has termed the manager's "process of decision". The between the lines message I shall try to convey is simple: systems analysis is an input to decisionmaking; its effective use, therefore, depends on both the quality of the analysis and on the capability of the decisionmaker to use the analysis to improve the quality of his decisions. The paper is divided into two basic sections. In the first section I shall present a two dimensional framework which is intended to facilitate an understanding of the concept of decisionmaking. And in the second section, I shall outline my view of what systems analysis is.

II. The Management Activity Matrix - A Framework

As Simon, among others, has pointed out, managers are basically decisionmakers. They identify problems, mull them over, and take action. Their success or failure depends largely on their knowledge, skill, judgment, and ability to influence others.

---

*Paper presented at the National Institutes of Health Conference on "The Role of the NIH in Fostering the Application of Systems Analysis to Academic Medical Centers", Bethesda, Maryland, February 25 and 26, 1971.

†Preparation of this paper supported in part by a Ford Foundation Urban Research Grant in Public Operation Management.

In a more formal sense, what managers do can be described within the framework of a management activity matrix (see Figure 1). The rows of this three by three array correspond to the basic categories of managerial activity defined by Anthony in his book, Planning and Control Systems: A Framework for Analysis [1]. Anthony's first category, strategic planning, row one in our matrix, is defined by Anthony as,

> "...the process of deciding on objectives of the organization, on changes in these objectives, on the resources used to attain these objectives, and on the policies that are to govern the acquisition, use, and disposition of these resources", [1, p. 16].

Thus, strategic planning decisions determine the basic character and direction of an organization. They affect the physical, financial, and organizational framework within which the output producing activities of the organization are carried on. Examples of strategic planning activities in an academic medical center include: choosing teaching, research and service objectives; planning the organization; setting admissions policies, faculty recruitment and retention policies, financial policies, and hospital affiliation policies; and choosing new "product lines", e.g. physician assistants.

Anthony's second category, management control, is described by him as,

> "...the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives", [1, p. 17].

Thus, management control decisions are made by managers within the framework of objectives and policies derived from the strategic planning process. Moreover, such decisions are to be measured in terms of their effectiveness

	INTELLIGENCE	DESIGN	CHOICE
STRATEGIC PLANNING			
MANAGEMENT CONTROL			
OPERATIONAL CONTROL			

Figure 1. The Management Activity Matrix

and efficiency. In this context, effectiveness is defined by measures that relate output to objectives, while efficiency is defined by measures that relate outputs to inputs. Examples of management control activities in an academic medical center include: formulating budgets, planning academic and non-academic staff levels, formulating recruiting practices for new faculty and students, deciding on research projects, deciding on curriculum modifications and deciding on rearrangements in physical plant.

Anthony's third category and the third row in our array, operational control, is defined as,

> "...the process of assuring that specific tasks are carried out effectively and efficiently", [1, p. 18].

Anthony distinguishes operational control from management control in two basic ways: (1) The focus in operational control is on the accomplishment of specific tasks (e.g. the scheduling of classrooms), whereas, the focus of management control is on the manager and his performance, and (2) The tasks to which operational control relates are well defined so that the need for management judgment as to what is to be done is minimized, whereas, management control activities are not specified, on the contrary, these activities require decisions as to what's to be done within the general constraints of the strategic plans. Examples of operational control activities in an academic medical center include: controlling the preparation and distribution of periodic budget reports, scheduling the use of a hospital's operating rooms, short-term cash management, and the scheduling of classrooms and laboratories.

To summarize, then, the three rows of our management activity matrix are labeled strategic planning, management control, and operational control.