

MANAGEMENT FOR TRANSPORTATION

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蒋朝哲 © 编著

交通管理学



西南交通大学出版社

Management for Transportation

Edited by

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图书在版编目 (C I P) 数据

交通管理学 = Management for Transportation:
英文 / 蒋朝哲编著. —成都: 西南交通大学出版社,
2015.7

ISBN 978-7-5643-4004-9

I. ①交… II. ①蒋… III. ①交通运输管理—高等学
校—教材—英文 IV. ①F502

中国版本图书馆 CIP 数据核字 (2015) 第 142093 号

Management for Transportation

交通管理学

蒋朝哲 编著

责任编辑 胡晗欣

封面设计 严春艳

出版发行 西南交通大学出版社
(四川省成都市金牛区交大路 146 号)

发行部电话 028-87600564 028-87600533

邮政编码 610031

网 址 <http://www.xnjdcbs.com>

印 刷 成都勤德印务有限公司

成 品 尺 寸 170 mm × 230 mm

印 张 12.75

字 数 298 千

版 次 2015 年 7 月第 1 版

印 次 2015 年 7 月第 1 次

书 号 ISBN 978-7-5643-4004-9

定 价 32.00 元

图书如有印装质量问题 本社负责退换
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Preface

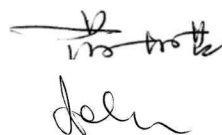
For years, Southwest Jiaotong University has attached importance to course construction, and this book is one of achievements supported by its Teaching & Research Fund. The book is aiming at the studies of undergraduates and postgraduates in the field of traffic and transportation, as well as assistance for the managers of traffic engineering.

This book is organized for the teaching goals that guide students to observe transportation phenomena from a managerial perspective. However, it is not with an ambition of establishing a new-born discipline. Transportation itself is a big example in which scientific minds, social activities and economic rules are integrated, while management is a field of theories and applications from various disciplines, such as Sociology, Economics, Mathematics, as well as Psychology. *Management for Transportation* defines itself as a teaching guidance, attempting to show the vein of management that connects with transportation. It hopes to be helpful both with teaching and students' managerial minds on transportation.

For such reasons, the book is generally divided into five chapters based on key behaviors in management: to get a basic impression of management, to form a strategy, to plan and control, to make decisions, as well as to manage changes. One single book cannot be hoped to perfectly cover the boundary of management and transportation, but this book provides a solid introduction to the most of the topics that are central to the essentials of management. The basic knowledge of these key elements is explicated respectively, while in the parts of "Connecting with transportation" there are following relevant introductions of

transportation conditions or applications in traffic. Besides students of traffic engineering, the students from management may also find this book relevant.

I must express my gratitude for the work that had been done by the whole group. Bing Liu and Yahui Cheng, two candidates of master's degree, had taken the job of organizing fundamental materials; Dr. Xingyu Chen had followed the whole process of publication. Dr. LAMINOU YAOUTCHI Maman Sani, a friend from Niger, gave beneficial suggestions when the writing work were going. As well, gratitude to consistent support from my wife and my lovely family. This book is dedicated to them.

A handwritten signature in black ink, appearing to be 'Xingyu Chen'.

June, 2015

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Chapter 1 Fundamentals of Management

The starting point for a book on fundamentals of management is obvious — a definition of management with some idea of the types of managers (level, entrepreneurs, line managers, etc.) and the skills and characteristics managers need. But, managers do not exist in a vacuum. So, it is important to understand the contexts in which managers work (types of organization plus the organizational, national and international cultures).

1.1 What is management?

Management takes its own significance in business, organizations, and all groups that need cooperation from members. It is the function that coordinates the efforts of people to accomplish goals and objectives using available resources efficiently and effectively. Management comprises planning, organizing, staffing, leading or directing, and controlling an organization to accomplish the goal. Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources and natural resources. Management is also an academic discipline, a social science whose objective is to study social organizations.

Management is a set of functions directed at the efficient and effective utilization of resources in the pursuit of organizational goals. By efficient, we mean using resources wisely and in a cost-effective way. By effective, we mean making the right decisions and successfully implementing them. In general, successful organizations are both efficient and effective.

A mature company could be examined from these aspects below:

Strategy and policy formation

As a company becomes more mature, it engages in more formal planning processes. A level 4 company continuously aligns its strategic plan not only internally with its business units but also externally with its business

partners, supply chain companies and industry network.

Organizational and process

More mature companies don't necessarily implement more formal process management approaches across the board and in one fell swoop; they just incrementally add structure to diminish chaos while allowing innovation. Companies involve the senior most members of the organization help centrally control such propagation of standards and processes while delegating responsibility to the organization. This process improvement can happen as companies maturity.

Organization governance

Companies grow from central monitoring of financial metrics to a more delegated monitoring of both financial and nonfinancial metrics. Such monitoring includes performance indicators and risk flags. Performance and risk management, respectively, can be applied to organizations of different maturity.

People and culture

Maturity increases as companies focus more on the growth of their human capital through training, career paths and knowledge management programs.

Technology

Technology becomes less ad hoc and more aligned with the business goals. Also, as with the strategy-and-policy-formation pillar, external entities such as business partners and supply chain members can become better networked.

1.2 Functions of management

The main functions of management are planning, organizing, staffing, directing and controlling. The key tools of management are supervisory skills, which must be learned and practiced.

Planning

An airline is dependent for its very existence on the ability of its top planners. Failure to forecast the demand for air travel and to plan how to meet

a rising or shrinking demand spells the difference between success and failure. The management process begins with planning, which sets the stage for what the organization will do, both globally and specifically.

Goals should be established for the company as a whole and for each administration and department, as well as for individual activities. A goal is anything that an organization or group is seeking to do. Some goals are large, such as buying a hotel chain or building a new flight kitchen to serve a growing hub airport. Other goals are small, such as getting a report completed by Friday or handling more reservations calls per hour than last month.

Classifications of goals

Companywide goals

These are the general goals an organization wants to achieve. Some examples might be “earn an annual return of 12 percent on our investment”, “capture 25 percent of the northern market”.

Administration or departmental goals

These goals should be related to—and should lead directly to—the achievement of companywide goals. Some examples might be “improve on-time performance by 10 percent systemwide during the next quarter”, “develop and implement a new training program for apprentice-level mechanics in the sheet metal shop”, and “hold flight attendant absenteeism to 7 percent”.

Individual goals

These are the goals that specific persons will have to achieve if departmental, division, group or unit goals are to be met. Some examples might be “increase my cargo sales volume by 10 percent over last year” and “process 10 percent more insurance claims per week”.

Organizing

Once plans have been made and policies determined, the job of carrying them out becomes business organization and operation. Organizing involves the division of work among employees and the determination of how much authority each person will have. More specifically, organizing may be defined as the process of logically grouping activities, delineating authority and responsibility, and establishing working relationships that enable the employees,

and thus the entire unit, to work with maximum efficiency and effectiveness.

The chief purpose of organization is to establish efficient lines of responsibility and authority designed to (1) provide supervision of all work with a maximum utilization of knowledge and experience to best advantage, (2) efficiently assign and schedule all work with the proper priority observed in projects to be accomplished, (3) provide a means whereby management can be kept informed of the efficiency and dispatch with which each particular unit is fulfilling its function, and (4) establish a sequence of importance in job classifications so that all employees can adequately judge the possibilities for advancement.

Organizing needs attendance from staffs. Staffing involves stationing people to work in the positions provided for by the organizational structure. It includes defining work force requirements for the job to be done, as well as inventorying, appraising, and selecting candidates for positions; compensating employees; and training or otherwise developing both job candidates and current employees to accomplish their tasks effectively.

Leading

The essence of leading is ruling and governing. For implementing, human resource, organizational design, skillful motivation, mechanism design, all of which are relevance.

Staffing

Staffing involves stationing people to work in the positions provided for by the organizational structure. It includes defining work force requirements for the job to be done, as well as inventorying, appraising, and selecting candidates for positions, compensating employees and training, or otherwise developing both job candidates and current employees to accomplish their tasks effectively.

Directing

Directing includes assigning tasks and instructing subordinates on what to do and perhaps how to do it. Because the supervisor's job is to get things done through other people, effectiveness is closely tied to communicating directives clearly and in a way that will bring about the desired action. It is essential that subordinates understand the orders, or they will not be able to carry them out.

In directing people, it is important to know how much information and what kind of information to give them. Orders should be fitted to the receiver; the new employee needs to be instructed in detail, but the experienced worker may need to know only the objectives and then be capable of choosing the means to attain them.

Controlling

Controlling is the measuring and correcting of activities of subordinates to ensure that events conform to plans. Thus, it involves measuring performance against goals and plans, showing where deviations occur and, by putting in motion actions to correct deviations, ensuring accomplishment of plans. Basically, control involves three steps: (1) setting performance standards for the work, (2) comparing actual performance with the standard, and (3) taking corrective action to bring performance in line with the standard.

Standards of both quantity and quality should be determined as precisely as possible. Until they are determined and established, a job will be judged by three different standards: (1) workers' ideas of what constitutes a fair day's work and of what they think might be expected of them, (2) supervisors' ideas of what they would like to have done and of what they think can be done, and (3) top management's criteria and expectations. Whether quantity and quality standards are recognized, they exist, and each level in the organization—workers, operating management, middle management, and top management—may be judging jobs by different standards.

1.3 Types of managers

Many different kinds of managers are at work in organizations today. One way to differentiate among managers is by their level in the organization.

Board directors

The chief governing body of a corporation is the board of directors, which is elected by the stockholders. This board ranges in size from 3 to 20 or more members and represents a cross-section of prominent individuals from various fields, including banking, insurance, law and accounting. This body decides such board questions as whether the company should be expended, or whether the

company should diversify into other fields. The board also has the sole responsibility for the declaration of dividends. The basic decision about a dividend involves other decisions, such as what percentage of the year's earnings should be retained for company use, and whether the dividend should be paid in cash or in stock.

The directors of the corporation are responsible for the appointments of a president, secretary, treasurer, and other executive officers who handle the actual details of management. Often, the board elects some of its own members to fill these important posts.

Top managers

Top management is the highest level of management in the organization. The job of top management is to determine the broad objectives and procedures necessary to meet the goals established by the board of directors. Top management will also make recommendations to the board regarding the goals of the company. What distinguishes top management from middle management is not always clear in a given organization, but the individuals in this group usually have many years of experience in all phases of management. Often who are called key executives, senior executives, or major executives, usually bearing the title of president, executive vice-president, or senior vice-president.

Middle management

Middle management is the second level of management in the organization and is responsible for developing operational plans and procedures to implement the broader ones conceived by top management. Middle managers are probably the largest group of managers in most organizations. Much leeway is allowed in the development of plans, so long as the end result is in keeping with top management's requirements. Decisions on which advertising media to use, how many reservations agents are needed, and what new equipment to purchase are examples of those made by middle management.

Middle management includes individuals who head up departments or divisions within a major administration, or it might include the simulator division head, who reports to the flight procedures and training department head.

Operation management

Operating management is the lowest level in management. It includes

managers, assistant managers, section chiefs, general supervisors, and supervisors who head up sections, groups, or units that report to division or department heads. Examples might include the manager of display advertising or the general supervisor of the sheet metal shop. Members of the operating management group are primarily concerned with putting into action operational plans devised by middle management. Generally, they do not initiate plans of their own.

1.4 Titles of managers

Regardless of their level, managers may work in various areas within an organization.

Marketing managers

These managers work in areas related to the marketing function-getting consumers and clients to buy the organization's products or services. These areas include new-product development, promotion and distribution.

Financial managers

They deal primarily with an organization's financial resources. They are responsible for activities such as accounting, cash management and investments. Operations managers are concerned with creating and managing the systems that create an organization's products and services. Typical responsibilities of operations managers include production control, inventory control, quality control, plant layout and site selection.

Human resource managers

They are responsible for hiring and developing employees. They are typically involved in human resource planning, recruiting and selecting employees, training and development, designing compensation and benefit systems, formulating performance appraisal systems, and discharging low-performing and problem employees.

General managers

They are not associated with any particular management specialty. Probably the best example of an administrative management position is that of