

**YOUR
MANUFACTURING
COMPANY**

YOUR MANUFACTURING COMPANY

How to Start It / How to Manage It

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PREFACE

Your Manufacturing Company is the first text to provide everything needed to organize and manage the day-to-day operations of a manufacturing company.

The start-up company entrepreneur can use the book as an operating manual to get the business launched and underway in a matter of hours or, at the most, days.

Ongoing company entrepreneurs and functional executives will find the book an excellent guide for refining or streamlining business systems as their operations expand and become more complex.

The student contemplating a career in the manufacturing sector will find the book to be a synopsis of the many texts that provide in-depth treatment of individual manufacturing-company functions. It ties all the functions together to provide an integrated overview of operating and managing a manufacturing company.

Most currently available texts related to manufacturing companies cover a single function in more depth and detail than the working entrepreneur, functional executive, or student really needs or can assimilate. These texts are also oriented to large, sophisticated, and highly structured organizations rather than small businesses. They are long on theory and woefully short on application of the theories in solving day-to-day operating problems. *Your Manufacturing Company* contains real-world functional business systems that can be put into practice quickly and easily to produce immediate results. The book is seasoned with strategies, tactics, and techniques that are problem solvers or have enhanced the success of others.

This book is a compendium of over forty functional business systems needed to organize and manage the day-to-day operations of a manufac-

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turing company. Each system is succinctly yet thoroughly described and discussed. The language peculiar to each function is explained. Inputs to each system, the system process, the output of the system, and how systems interact are covered. Step-by-step flowcharts accompanied by a narrative discussion of the what, why, who, and when of each action step or transaction are provided. Suggested first-cut management policies, decision rules, and approval limits are included.

The systems covered in this book are not new or theoretical concepts—they are time-honored, proven systems that have evolved and been refined over time into industry norms. The same or close variations of these systems are in daily use in countless successful manufacturing companies.

Finally, the thrust of this book is to save the entrepreneur precious hours and days in establishing the functional business systems needed to operate and manage the company. Those precious hours and days are better spent in developing the product line and getting it to the marketplace.

Robert A. Crinkley

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PART ONE

INTRODUCTION

The two chapters in Part 1—“About the Book” and “The Manufacturing-Company Language”—set the stage and provide the background, assumptions, and premises underlying the manufacturing-company functional business systems covered in this book.

CHAPTER 1: ABOUT THE BOOK

This chapter describes the resource base that underpins the total enterprise and the allocation of that resource base to the functions that perform the day-to-day operations of the business. It describes and discusses the major manufacturing-company functions: what they do and how they meld into the total operation; it also describes the composition of the functional business systems that coordinate, control, and manage the company. It also explains how to use the book to construct and implement functional business systems in start-up and ongoing manufacturing companies.

CHAPTER 2: THE MANUFACTURING-COMPANY LANGUAGE

This chapter contains a discussion of the language unique to manufacturing companies that integrates the many manufacturing-company functions into a contiguous whole. It defines and interprets what the language means to and the effect it has on the operation and management of the business.

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ABOUT THE BOOK

All manufacturing companies require a set of resources that underpin the total enterprise: a product line that fits the marketplace, physical facilities, equipment, money, people, and management. A major initial task of the *start-up manufacturing-company entrepreneur* is to provide this resource base. It must be sufficient to launch and sustain the enterprise until it has become self-supporting. A significant continuing task of the ongoing manufacturing-company entrepreneur is to modulate and expand the resource base to support the changing needs of the enterprise as it evolves and expands.

RESOURCE BASE ELEMENTS

This book starts with the premise that the resource base is in place and treats the task of allocating resources to, and managing, the many manufacturing-company functions that perform the day-to-day operations of the business. First, it gives a brief discussion of the elements of the *resource base*.

Product Line, Marketplace

Start-up manufacturing companies usually commence operations with a single product or a limited product line that the owners and financial backers feel will meet the projections in the business plan. By definition, successful ongoing manufacturing companies have a product line that fits the marketplace. Keeping the product line viable and growing is a key

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requisite for success. The product selection process includes a determination of which products should remain in the line, which should be phased out, and, importantly, how to decide which new products to develop and add to the line.

Facilities

Start-up manufacturing companies often commence operation in the garage or basement workshop of one of the partners. As the business evolves from a start-up to an ongoing situation, a rented or leased facility makes sense. The type of facility and its location are functions of the manufacturing process and the availability of vacant space. Cost and flexibility—the ability to easily and rapidly expand or contract—are key facility decision factors.

Equipment

The equipment required to develop and manufacture the product can be purchased or leased. It is often possible to subcontract operations that require expensive specialized equipment. The decision to purchase, lease, or subcontract is dependent first on availability of cash and second on the rate of return on investment to purchase or lease versus the cost to subcontract.

People

Quite often the start-up company cadre is yourself, possibly your spouse, and one or more partners. Of necessity, all the business functions must be performed by the initial cadre. As the business expands, the “all things by all people” configuration will evolve into functional departments supervised or managed by trained and experienced functional executives.

Financing

A comprehensive, well-prepared business plan is almost always required to secure initial or first-round financing from outside sources. It is recommended that the business plan be revised or upgraded annually. A primary reason for the annual business-plan update is to disclose require-

ments for additional growth, working, or equity capital well in advance of actual need so that subsequent rounds of financing can be planned and secured on the most favorable terms.

Management

People who manage manufacturing companies have learned that the seeming maze of parts, material, equipment, facilities, money, and people must be controlled and coordinated to provide order and continuity in the day-to-day operation of the business. Successful manufacturing companies provide control, coordination, and continuity through functional business systems of interlocking data and information flow—forms and reports—gathered manually, mechanically, or electronically. This book will show you how to construct such systems for your company.

Manufacturing-Company Functions

A common denominator of all manufacturing companies, regardless of the product line, is a need to cope with a relatively large population of sizes, shapes, and types of purchased material, in-house fabricated parts, and purchased parts. A manufacturer of blue jeans must cope with legs, pockets, waistbands, and belt loops fabricated in many sizes and styles from material of different colors and weights, together with purchased buttons, *zippers*, and the *all-important rear pocket brand label*. Kitchen cupboard manufacturers are involved with different styles and sizes of doors, drawers, sides, tops, bottoms, back panels, and shelves, fabricated from different types of wood, and with purchased items such as hinges, screws, drawer slides, door pulls, nails, glue, and finishing materials. A manufacturer of computer products handles a myriad of electronic components, circuit cards, wire, enclosures, hardware, and so on.

The coping mechanism is to organize the company into functions so that each function performs a discrete and defined portion of the day-to-day operation of the business.

Marketing The marketing function is the conduit between the company and the marketplace. Inputs from the marketplace to the company influence the specifications for new products, indicate the demand for existing products, and provide feedback on the activity of the competition. Activity from the company to the marketplace produces orders.

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Product Development The product development function designs new products and provides the manufacturing functions with the documentation and technical support that enable the product to be produced.

Post-Sale Support The post-sale support function provides the services necessary to install the product, train the customer to use the product, and maintain the product.

Material Requirements Planning The material requirements planning function determines how many of which items are needed on what date to support manufacturing the product in accordance with a master schedule.

Purchasing The purchasing function procures from outside sources all goods and services needed to operate the business.

Work in Process The work in process function consists of planning for and providing sufficient work force, space, and equipment to enable manufactured parts and assemblies to be completed in accordance with the master schedule.

Receiving The receiving function receives all goods or commodities purchased from outside sources. It assures that what is received is the correct quantity of what was ordered and that it is not damaged.

Stockroom The stockroom function stores, controls, protects from damage, and issues parts and materials to the manufacturing process.

Shipping The shipping function packages, packs, and arranges for shipment of all products or commodities shipped by the company.

Quality Control The quality control function inspects and tests all purchased parts and material, work in process, and finished goods to assure compliance with established company quality and reliability criteria.

Accounting The accounting function maintains the company accounting system: journals, ledgers, and financial statements. Accounting also handles all financial transactions: accounts payable, accounts receivable, payroll, debit and credit memos, and others.

Cost The cost function allocates all costs incurred by the company to the proper account and provides management with an analysis of the variance between planned or standard cost and actual cost.

Cash Management Cash management is a management function that involves planning and securing the financing required to underwrite the operation and controlling cash flow in accordance with the plan.

Functional Business Systems

In its simplest form, managing or running a manufacturing company is a never-ending series of decisions and implementation of decisions. In a start-up situation, the entrepreneur makes and implements all the decisions. As the business grows and expands, more and more people become involved in decision making and implementation. To control the business as it grows and expands, the entrepreneur establishes functional business systems consisting of decision rules, paperwork, a process, and people.

Decision Rules Decision rules are management policies that govern or confine decisions made by individual functions within predetermined parameters, for example, how much inventory to buy and carry, what types of parts are to be covered by an engineering drawing, when sales commissions are to be paid, what types of purchases require quotations, and the mark-up ratio for pricing spare parts.

Paperwork Paperwork consists of forms and the data entered on them that either cause or are the result of an action step taken by someone, that record transactions, that are running or perpetual records, or that are planning documents or “to do” lists. A *purchase order* form is the paperwork that starts a procurement transaction. The *vendor invoice* and *packing list* are the paperwork that completes a procurement transaction. Paperwork can be a physical piece of paper, or it can take the form of a video terminal display of the same data.