

# Business Performance Excellence

Through Total Quality Management

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2nd Edition



Jack P. Pekar

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**Jack P. Pekar**

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# Foreword

Committee F16 on Fasteners wants to do all it can to assure that the fastener industry is able to comply with the Fastener Quality Assurance Act (FQA) of 1990, which was last amended on June 8, 1999. F16 is comprised of fastener manufacturers, users, and distributors, all of whom have a large stake in this law. As a consequence, F16 requested and sponsored me to write a manual that would show our members how to comply with the law and remain competitive. But this book goes beyond assisting those in the fastener industry to cope with the FQA. It can be of benefit to any industry or enterprise because it is about Performance Excellence through Total Quality Management (PE/TQM). This revision puts more of a focus on criteria that shapes the guidelines for performance excellence defined in the Baldrige National Quality Program.

This book was written so that others may share what I have learned through 43 years in the quality profession. It is a book that presents principles and guidelines that, when applied, can be used to develop and implement a total quality management system. Today, more than ever, we in the business community face challenges at every turn from every corner of the world. Those businesses that survive will be those that demonstrate leadership innovation and apply a customer-centered and process-driven approach to their business practices.

Those who practice the teachings in this book have a better chance than most to achieve success. They may find the journey difficult and cluttered with obstacles that impede their progress, but, if they are true leaders, their message will be heard. They must not and cannot be discouraged for they must lead us to and through the new global market.

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# Introduction

Because there is no single path to achieving performance excellence within an organization, there are no hard and fast rules to follow to become a world class company.<sup>1</sup> This is because all organizations have their own cultures, people, and technologies. What may work well for one company will not necessarily work for another. The only constants are basic criteria/guidelines for performance excellence, which, when followed, lead to success. These criteria/guidelines are as follows.

## Leadership Commitment

The leadership of an organization must be committed to continuous improvement. This commitment must be visible throughout all layers of management. Management must “walk the talk.” Only when management is committed to create a sustainable, high-performing organization with a business and customer focus will employees excel at what they do. It takes time to change work cultures and work habits, but with perseverance the message of enlightened management will prevail. Employees want to do a good job; all they need are the right tools and the right systems. These can be supplied only by management.

## Customer and Market Focus

The organization must be customer-centered. Everyone in the organization must understand that without a customer-centered approach to business practices there would be no purpose to their work, no repeat business, and no positive referrals. What must also be understood is that the external customers are served by the internal customers (employees). There is, therefore, a need to focus on the requirements and expectations of both internal and external customers. One of the first steps management should take in this regard is to conduct surveys of the external and internal customers. The voice of the external customer will provide knowledge about the needs and desires of current and future customers. Employees (internal customers) should be apprised of the results of external customer surveys so they understand the needs of the market that they serve. A truly committed management team will also allow employees to see the results of internal surveys. This brings “the good, the bad, and the ugly” to the table for discussion. The good can be improved upon. The bad can lead to opportunities for improvement. The ugly must be addressed through open, two-way communication with cross-functional teams to find solutions. The voice of the internal customer may best be accessed through two survey tools provided by the Baldrige National Quality Program: Are We Making Progress? and Are We Making Progress As Leaders?

## Workforce Focus

The organization must assess the current skill level and awareness of total quality principles of all employees. This as-

essment begins with top management and moves throughout the organization. Begin by training top management on total quality and performance excellence. Once top management is trained and committed to these criteria/guidelines, it will be easy to train those who follow. This training will pay high dividends at every level in the organization. Through training, be sure that all employees have the necessary skills and technical knowledge to perform their jobs effectively. Thus they may be counted on to be effective participants in contributing to the total quality and over-all improvement process. Information should be provided to employees describing external educational programs available to them through various professional organizations and colleges. By creating an awareness of these opportunities, the organization demonstrates its commitment to continuous improvement of employee skills.

Soon after the commencement of training, management must provide opportunities for employees to apply what they have learned. They need to test their skills. They will not and should not be content with the way things are. Every aspect of their job should be evaluated and measured against the new paradigms. This will bring new challenges to their managers. The managers, in turn, through their own training, will now be equipped with the attitudes and analytical skills to consider their suggestions. They will no longer feel the threat of losing control.

## Measurement, Analysis, and Knowledge Management

In order for management or employee improvement teams to determine if they made process improvements, they need to know where they were when they began. If we do not have historical data to let us know, we must at least determine where we are through a short-term study.

The first step is to define the organization’s critical performance indicators (CPIs), which are defined as those measures that contribute to customer satisfaction. There are several tiers of indicators in any organization, and they can be broken down as primary, secondary, and tertiary. Examples of first-tier CPIs include On-Time Delivery, Customer Satisfaction Indicators, and Cost of Quality. Second-tier CPIs are measures that contribute to the first-tier CPIs. Examples of second-tier CPIs for On-Time Delivery may be quote turn around, manufacturing lead time reduction, and supplier performance. Third-tier CPIs are the employee involvement action items. Examples of third-tier CPIs for manufacturing lead time reduction could be (1) set up reduction and (2) scrap and rework reduction. CPIs are discussed in detail in Chapter 2. In general, the organization needs to measure, analyze, review, and improve its performance through the use of data and information at all levels and parts of the organization.

## Strategic Planning

It is the responsibility of senior management to understand the organization’s competitive environment, their key strategic challenges and advantages, and their system for performance improvement. Senior management along with their management team need to focus on actions that include on-

<sup>1</sup> Portions of this Introduction were taken either in whole or in part from an SME technical paper by the author entitled, “Continuous Improvement—Managing Yesterday, Leading Today.” Reprinted with permission of the Society of Manufacturing Engineers, Copyright 1993, from the Cold Forming ’93 Conference.

going improvements in productivity that may be achieved through eliminating waste, improving customer satisfaction, maximizing return on investment, and improving quality through a strategic action plan. This plan should include Six-sigma and lean manufacturing principles, or variations of these principles. One tool for this assessment is the Organization Profile analysis available through the Baldrige National Quality Program. This document is free and can be obtained from NIST.

The completion of this assessment sets the context for the way your organization operates. It will clearly define your environment, key working relationships, strategic challenges and advantages, and provide you direction in guiding your performance management system.

## Process Management

The organization needs to understand its business processes, and then design, manage, and improve them to deliver customer value and consistent organizational success and sustainability. One of the more useful tools to assess your business and its current state is to conduct an analysis of your organization. The Organizational Profile work sheet serves very well in providing you with the current state of your business. Once an understanding of the organization's business processes are known, they may be managed and improved upon through such documents as ASTM F2688-08<sup>2</sup> (Standard Guide for System-Based, Customer-Centered Quality Plan for Manufacturers), ISO/TS 1694<sup>3</sup> (Quality Management Systems—particular requirements for the application of ISO 9001:2000 for automotive production and relevant service part organizations), ISO 9001<sup>4</sup> (Quality Management Systems Requirements), and ASQ 9001 (Quality Management Systems). The application of statistical process control (SPC), Six-sigma, and lean manufacturing in the organization's processes will facilitate the effective elimination of waste and create processes that are truly efficient.

## Recognition and Awards

Everyone appreciates a pat on the back after they have achieved a noteworthy goal or successfully completed a difficult or important task. This encourages further participation

by the employee and shows other employees that their efforts are appreciated. When a team has met an established goal, the entire team should be recognized.

The form of recognition should fit the accomplishment; in other words, the value of the recognition should be commensurate with the value of the accomplishment. Also, when recognition is given, it should be consistent. To assure consistency, a panel of management and nonmanagement employees should be established to set up a recognition program to acknowledge those individuals and/or teams who meet company objectives.

## Communication

The organization must communicate with the work force, their suppliers, and their customers. I cannot provide enough differentiation among this trilogy to say one is more important than the other. All participants in this trilogy of communication must interface for an organization to be truly successful. Within the organization, employees at all levels need information about continuous improvement projects so they can become aware of progress, their contribution, and the effect these projects have on critical performance indicators. Business goals must be communicated to suppliers. Suppliers should be viewed as extensions of the organization who contribute to the overall success of continuous improvement. They should be part of decisions to utilize purchased services.

Suppliers are specialists in their fields of expertise; therefore, their input should be required when decisions are made to use them. World class purchasers understand the difference between price and value. As purchasers (customers) we expect, and should demand, products that contribute to our success. The voice of the customer must be heard. Customers are the reason we are in business. Without customers, no provider of goods or services could survive. To understand customers' needs, we must listen to their messages. Invite existing and potential customers to your facilities and ask them to apprise your management team of their business objectives. Ask how you can assist them in achieving their goals.

## Results

An organization must make it a point to examine the effectiveness of performance and improvement in all eight of the previously mentioned criteria on the path to Performance Excellence: Leadership Commitment, Customer and Market Focus, Workforce Focus, Measurement, Analysis, and Knowledge Management, Strategic Planning, Process Management, Recognition and Rewards, and Communication.

<sup>2</sup> Annual Book of ASTM Standards, Vol 01.08.

<sup>3</sup> Available from Automotive Industry Action Group (AIAG), 26200 Lahser Rd., Ste. 2000, Southfield, MI 48034-9738.

<sup>4</sup> Available from the American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

# Acronyms

ANSI	American National Standards Institute
ASQ	American Society of Quality
ASTM	American Society for Testing and Materials
BNQP	Baldrige National Quality Program
CMM	Coordinate Measuring Machine
CPI	Critical Performance Indicators
DMADV	Define, measure, analyze, design, verify (used in Six-sigma applications)
DMAIC	Define, measure, analyze, improve, control (used in Six-sigma applications)
E&I	Empowerment and Involvement
FAC	Fastener Advisory Committee
FMEA	Failure Mode and Effects Analysis
FQA	Fastener Quality Act
HRC	Hardness Rockwell C
JIT	Just in Time
LPA	Layered Process Audits
NIST	National Institute of Standards and Technology
NVLAP	National Voluntary Laboratory Accreditation Program
P&IC	Production and Inventory Control
PE	Performance Excellence
PE/TQM	Performance Excellence/Total Quality Management
PIE	Plan, Initiate, Evaluate
QFD	Quality Function Deployment
R&R	Repeatability and Reproducibility
SCD value	Severity rank times the Capability rank times the Detection rank
SEM	Scanning Electron Microscope
SME	Society of Manufacturing Engineers
SPC	Statistical Process Control
SPQP	Service/Product Quality Planning
SQC	Statistical Quality Control
TCQ	Total Cost of Quality
TQM	Total Quality Management



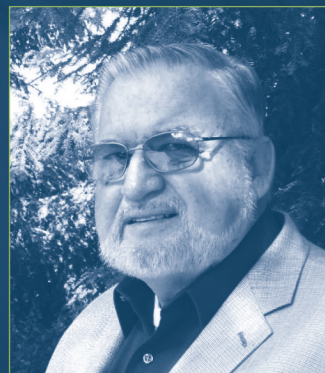
## About the Author

Jack P. Pekar is a graduate of the Ohio University with a Bachelor of Science in Education, majoring in mathematics. He is the lead principal for PT&G Consulting, specializing in the Baldrige National Quality Program's Criteria for Performance Excellence.

Jack has been active in the fastener and quality profession since 1964. His experience includes that of line inspector, supervisor, manager, and owner as he gained knowledge in his chosen profession. He worked for such fastener manufacturers as Lamson & Sessions, E.W. Ferry Screw Products, and SPS Technologies. At these organizations, he gained valuable experience in all phases of fastener processing. At Cleveland Twist Drill, Allied Machine & Engineering, and Kennametal Inc., he gained knowledge as a fastener purchaser and user. At these organizations, he set up programs to assure strong and viable supplier bases. He led all of these companies to many successful certification awards from major corporations as well as ISO 9000 registration.

Jack has been a member of ASTM International (ASTM) since 1976 and served as subcommittee chairman for F16.93, Quality Assurance Provisions for Fasteners, Vice Chairman of F16.01, Test Methods, and Main Committee Chairman of F16 on Fasteners. He is a Fellow of ASTM, and a senior member of SME and ASQ. He served on the Board of Directors of the American Association for Laboratory Accreditation (A2LA), and ASTM. Jack also served on the Board of Examiners for the Baldrige National Quality Program during 2002, 2003, and 2004.

In addition to his business activities, he was active civically and served on the Board of Directors and as Vice President of the Solon Chamber of Commerce. In 1991, Mr. Pekar received the President's Award from that organization for outstanding community service.



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