



THE QUALITY PERFORMANCE MANAGEMENT SYSTEM: A BLUEPRINT FOR IMPLEMENTATION

Bureau of Engineering Research
The University of Texas at Austin

Publication 10-3
February 1990

The purpose of this publication is to make available to industry the results of research conducted by the Construction Industry Institute (CII). The publication does not necessarily represent the views of CII member companies, but is offered as a contribution to the industry.

CII was founded in 1983 to improve the cost effectiveness of the nation's largest industry. The members, who represent a broad cross-section of owners and contractors, believe that many of the problems that limit cost effectiveness are common ones, and that real improvements can be best accomplished in a cooperative environment with the benefits being shared by the construction industry at large.

The Construction Industry Institute
The University of Texas at Austin
3208 Red River
Suite 300
Austin, Texas 78705-2650
(512) 471-4319
FAX (512) 499-8101

The Quality Performance Management System: A Blueprint for Implementation

**Prepared by
The Construction Industry Institute
Quality Management Task Force**

**Publication 10-3
February 1990**

© 1990 Construction Industry Institute™.

The University of Texas at Austin.

CII members may reproduce and distribute this work internally in any medium at no cost to internal recipients. CII members are permitted to revise and adapt this work for the internal use provided an informational copy is furnished to CII.

Available to non-members by purchase; however, no copies may be made or distributed and no modifications made without prior written permission from CII. Contact CII at <http://construction-institute.org/catalog.htm> to purchase copies. Volume discounts may be available.

All CII members, current students, and faculty at a college or university are eligible to purchase CII products at member prices. Faculty and students at a college or university may reproduce and distribute this work without modification for educational use.

Printed in the United States of America.

TABLE OF CONTENTS

<i>Chapter</i>	<i>Page</i>
Executive Summary.....	v
1. Introduction	1
Objective	1
Criteria	2
Optimum Detail	2
Quality Cost Breakdown.....	3
2. Implementation of the QPMS	4
Implementation Steps	4
QPMS Computer Template	5
3. How to Use Data for Management Analysis	6
Example Project.....	6
4. Closure	12
Appendix: Glossary of Quality-Related Terms	13
Acknowledgement	15

EXECUTIVE SUMMARY

The Quality Performance Management System (QPMS) provides an easy-to-use tool which helps identify ways to improve the processes we use to achieve quality and reduce the overall cost of quality. The QPMS can be implemented at negligible cost. It allows intelligent decisions to be made in the execution of projects.

Since the cost of quality is estimated to be at least one-fourth the total of the project cost, significant cost savings are available on current and future projects.

INTRODUCTION

The United States is getting clobbered in steel, auto, semiconductors, construction, and financial services alike...For the most part, the quality of made-in-America goods and services is questionable; perhaps "stinks" is often a more accurate word.

Tom Peters
Thriving on Chaos, 1987

Startling statement? Shocking? Or is it overstated? Sadly, the statement is true, especially in construction. As The Business Roundtable reported so succinctly in its Construction Industry Cost Effectiveness (CICE) Project summary in 1983, "The United States is no longer getting its money's worth in construction."

This publication presents a blueprint for implementing the Quality Performance Management System (QPMS), a management tool developed by CII to give management the information necessary to identify quality improvement opportunities. By defining quality as "conformance to requirements," quality becomes measurable, provided that requirements are clear and quantifiable. Quality costs money; the total combines the costs of quality management efforts and the costs of rework caused by not doing a job right the first time. (A glossary of quality-related terms is given in the Appendix.)

QPMS uses existing cost control systems or a stand-alone personal computer and spreadsheet template to summarize and present relevant cost-of-quality information in both tabular and chart forms. Utilizing this information, managers and quality improvement teams can determine *where the largest* costs of quality expenditures occur. Detailed analysis of these areas will indicate what improvements can be made. Implementation of these improvements will result in achieving quality at a reduced cost.

Objective

The objective of this publication is to present a blueprint for implementing a system (QPMS) to categorize and measure quality-related costs involved in the design and construction of engineered projects. Management can use the information generated to make intelligent benefit/cost decisions regarding quality-related efforts in the execution of projects.