

Total Quality into the 21st Century

1990 TOTAL QUALITY IMPROVEMENT PLAN



PG&E
POWER GENERATION BUSINESS UNIT



Total Quality: A Westinghouse Imperative



"We're making Total Quality an obsession at Westinghouse."

Frank R. Bakos
Vice President and General Manager

As we enter the 1990's, our commitment to achieve customer satisfaction through Total Quality has evolved to become the essence of our business. It is the way we work to create value for the customers, stockholders, employees and communities we serve.

And, as a result, our Power Generation Business Unit is now in a position — both structurally and from a cost basis — to become a world-class leader.

At Westinghouse, Total Quality is more than just the sum of individual improvement programs. It is a continuing process in every facet of our business operations. And with each division — every individual — working toward that common goal, we can create a Total Quality culture that will help us lead the way into the 21st century.

Our Definition of Total Quality

"Total Quality is performance leadership in meeting customer requirements by doing the right things right the first time."

Our Four Imperatives of Total Quality

The model for our commitment to Total Quality is based upon four Imperatives; which are supported by 12 conditions of excellence.

1. **Customer Orientation**... We must work together to set new world-class standards for our products and services by always meeting the expectations of our customers.
2. **Human Resource Excellence**... We must all value our individual contributions while remaining open to new ideas and further growth. Participation in Quality Improvement Teams is critical.
3. **Product & Process Leadership**... We must all commit to constant product improvement in response to customer needs, and ensure that our world-class manufacturing, engineering and management processes are always dedicated to the highest quality standards.
4. **Management Leadership**... Our managers must lead the way by defining objectives, motivating employees and monitoring progress throughout their organizations.



Our Strategic Plan: Total Quality into the 21st Century

The Environment

Our Power Generation Business Unit has good reason to be optimistic about the future. Fundamental changes and constant growth within the electrical industry present an opportunity for continued movement up the value chain.

- Increased demand and consumption
- Decreasing capacities
- Global trends toward privatization and competition
- World-wide financing options
- Stricter emissions requirements

These changes will enable us to provide new service to existing facilities... to manufacture new equipment... to supply expanded scope projects... and to operate, manage, maintain and own new power plants.

Our Objectives

To help guide the Business Unit into the 21st century, we have established the following strategic objectives:

- To become the #1 steam turbine OEM
- To become a leader in power projects
- To become a major player in combustion turbines
- To enhance our operating service presence
- TO DEMONSTRATE OUR COMMITMENT TO TOTAL QUALITY
- To establish a global market presence

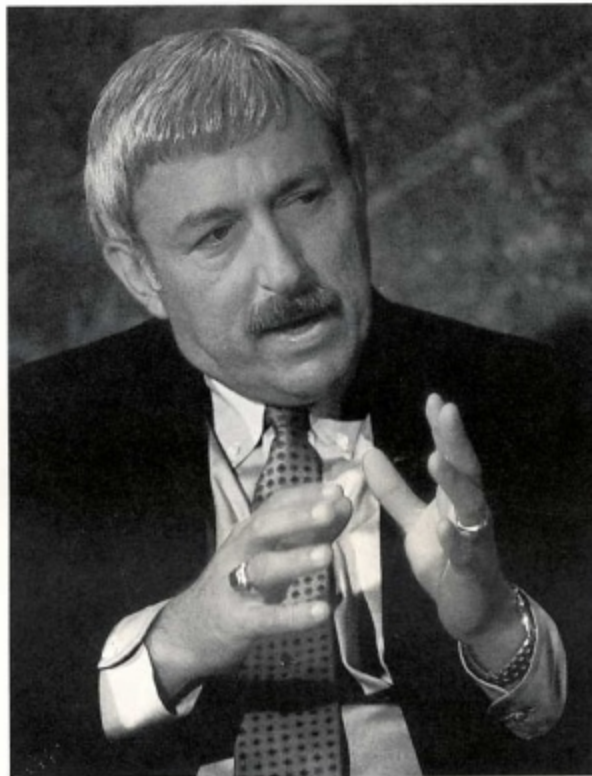
The Challenges Ahead

To meet our objectives, PGBU must achieve the following:

- THE RAPID REALIZATION OF A TOTAL QUALITY CULTURE
- Maintain traditional factory and field service sales
- Supplement and support competitive product lines in new generation equipment
- Implement a successful project backlog schedule
- Maintain the order rate of "good projects"



Our Journey of Total Quality into the 21st Century Starts With You...



This book is our Total Quality Plan. I want you to treat it like the Bible, The Marine Corps Guidebook, the Boy or Girl Scout Manual, or any other book that you have used as a source of inspiration or intelligence in plotting your individual path at certain times of your life and career.

First, let me emphasize one very important fact...you are part of the Power Generation Business Unit. Every single skill needed to conduct our business exists within this unit. You, as an individual, are a vital and important member of the Business Unit team.

From now on, I want you to focus your respective skills on one thing and one thing only - Total Customer Satisfaction. Each one of you has a customer. It could be the individual or department that you provide a service for, or a part, or a drawing. Or it could be a utility executive vice president that is in the process of buying a 300 MW unit from us. In any case, I want you to start knowing and understanding your individual customers...who they are, their likes, dislikes, what they need, and what they expect from you. Customer Satisfaction is not just a process, it is deep personal commitment to excellence, it is caring, it is continual and ongoing. It is never complete, once we think we are there, we are lost.

I want you to make Customer Satisfaction through Total Quality your number one priority. When you, when all of us, do that, we will go from World Class to Universe Class. We **will** be the Supplier of Preference!

Semper Fi
Frank Bakos

The Total

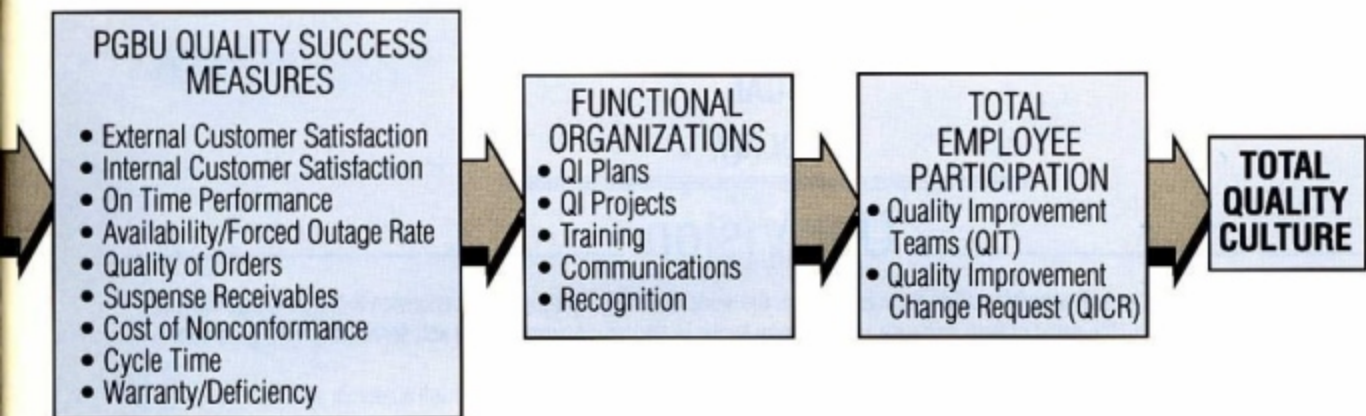


Total Quality in Power Generation is a long-term process — one that will enable the Business Unit to achieve the level of excellence expected by our customers.

The Flow Chart illustrates this process, showing the course we must take to maximize our experience and strengths while remaining totally responsive to the demands of the marketplace.



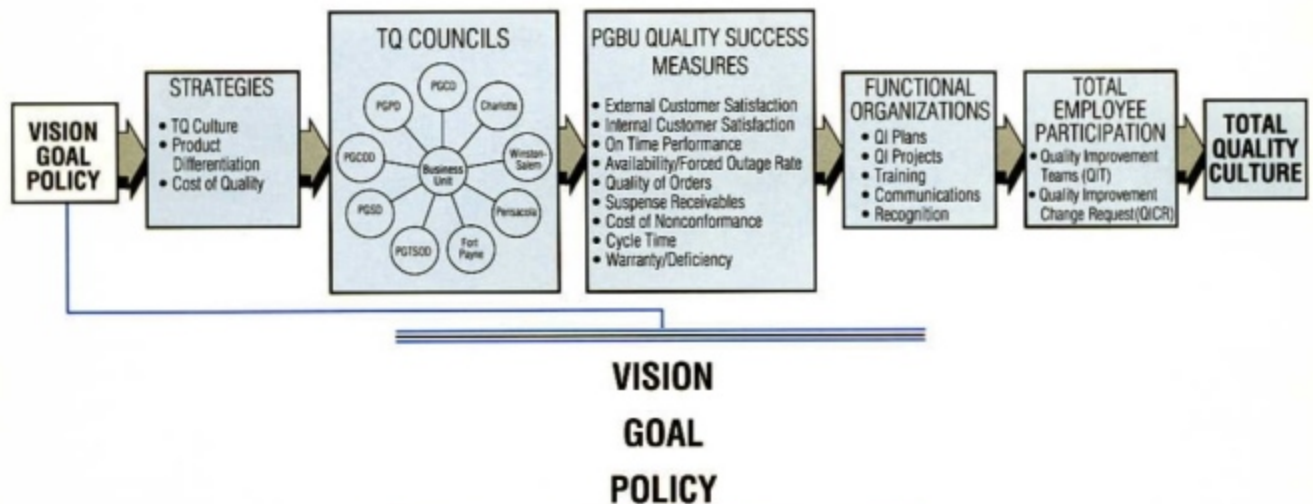
Quality Process



The Total Quality process begins with our Vision and the identification of our Goals. Strategies are then focused on the development of a Total Quality culture, increased market share, customer satisfaction and profitability.

Our network of Total Quality Councils coordinates planning and implementation, with Quality Success Measures creating a bridge between intentions and results. Meanwhile, the Functional Organizations are given primary responsibility for actual implementation.

Ultimately, our success will require Total Employee Participation through Quality Improvement Teams (QIT) and individual efforts... all of which must result in a Total Quality culture.



Our Vision

To establish the Westinghouse Power Generation Business Unit as the world class quality supplier of preference to the power generation industry worldwide, and to instill the name of Westinghouse as the quality leader in the design, manufacture and service of power generation facilities on a global basis.

We will become a totally customer needs driven organization by achieving Total Quality excellence through customer satisfaction.

We will provide our employees the climate, the resources and the opportunity to develop their individual skills to their full potential; and we will conduct ourselves with openness and integrity to our customers, employees, suppliers and communities.

Our Goal

*To
become
the
supplier
of
preference
through
Total
Quality.*

Our Quality Policy

TO PERFORM IN COMPLETE ACCORDANCE WITH CUSTOMER AND WESTINGHOUSE REQUIREMENTS.



STRATEGIES

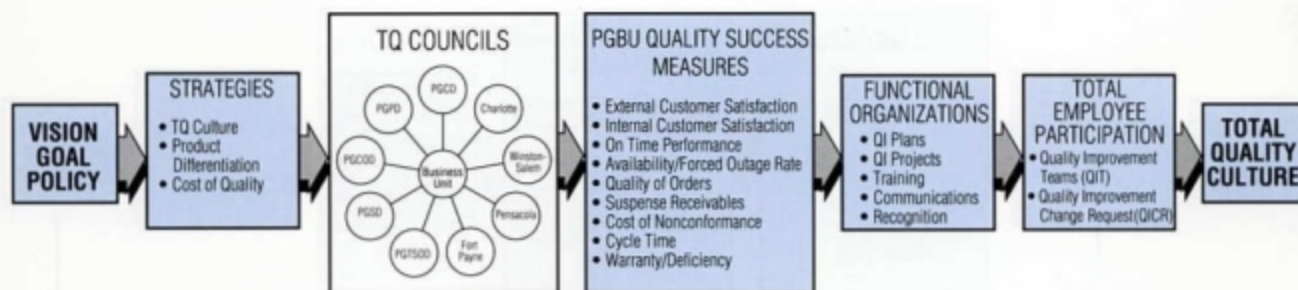
- TQ Culture
- Product Differentiation
- Cost of Quality

Our Strategies

The achievement of a Total Quality culture is a long-term process. However, for the short-term, our strategies and action plans must produce immediate results, visible to all of our customers.

Three primary strategies have been defined to help us accomplish this objective:

- 1) We must establish a Total Quality culture within the Power Generation Business Unit;
- 2) We must use our Total Quality focus as the basis for differentiating our products and increasing our market share; and,
- 3) We must increase the Business Unit's profitability and price competitiveness by improving every aspect of performance and reducing the cost of nonconformance.



TQ COUNCILS



Our Total Quality Councils

These councils are the governing bodies of the Total Quality process. They are primarily responsible for:

- Policy
- Approach
- Direction
- Commitment
- Priorities
- Assignments
- Reviews
- Communications
- Recognition
- Measurement
- Follow-up
- Leadership

Business Unit — Total Quality Council



Top Left to Right: Frank Bakos (Chairman), Don White, Romano Salvatori, Paul Loch, Howard Pierce, Pat Conroy, Ed Spitzer
Bottom Left to Right: Art Vedner, Joe McWhertor, Jim Craig, Bob Daigle, Chris Ranck, Nick Bartol, Dick Johnson



Commercial Operations Division Council

Sitting (L-R) Mike Owen
Jim Craig
Dick Johnson
Don White
Ed Spitzer

Standing (L-R) Herb Darvin
Andy Kaminsky
Craig Weeks
Randy Havey



Projects Division Council

(L-R) Roger Woodward
Ev Elijah
Reg McIntyre
Romano Salvatori
John Kessinger
Don Johnson



Service Division Council

Sitting (L-R) Bob Moore
Joe Kehler
Jack Simons
Pat Conroy

Standing (L-R) Doug Ware
Brad Howard
Phil Mescher
Mike Main



PGCD Council

Sitting (L-R)	Ron Schramm	Standing (L-R)	Jim Moir
	Gerry McQuiggan		Martin Gosling
	Rob Darwen	Not Shown:	Ian Jupp
	Clive Watkins		John Muir
	Garry Weimer		Len Sharpe
	Craig Laviolette		



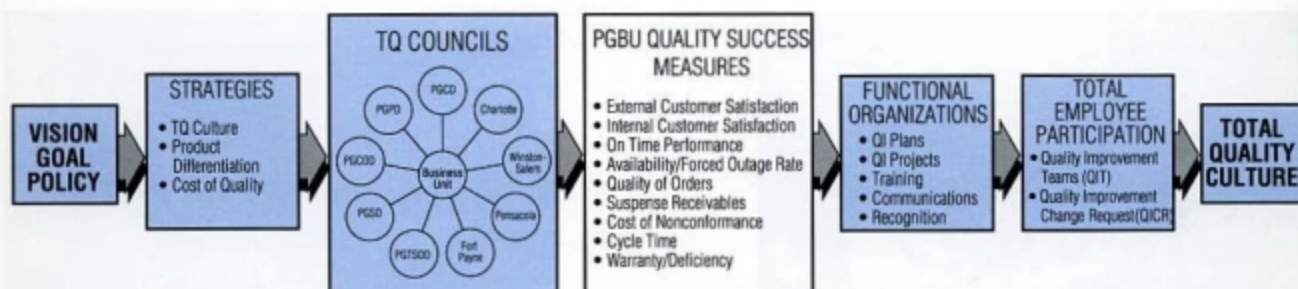
Pensacola Council

(L-R)	John Mortara
	Clay Jennings
	Chuck Schraishuhn
	Bernie Smelstoys
	Nick Georges
	Tom Allen
	Mike Webb
	Jose Martinez
Not Shown:	Al Bartholomew



Winston-Salem Council

(L-R)	Ron Artinger
	Dennis Honeycutt
	Jerry Webb
	Steve Wellhoelter
	Dick Deem
	Kevin Owens
	Phil Bonardi
	Al Lagore



PGBU QUALITY SUCCESS MEASURES

- External Customer Satisfaction
- Internal Customer Satisfaction
- On Time Performance
- Availability/Forced Outage Rate
- Quality of Orders
- Suspense Receivables
- Cost of Nonconformance
- Cycle Time
- Warranty/Deficiency

The Measure of Our Success

To achieve our goals and establish a Total Quality culture within the Power Generation Business Unit, it is important for us to continually assess our progress. For that reason, we have established a comprehensive set of Quality Success Measures and assigned them to members of the Business Unit and other Department leaders.

Following is a complete overview of our current status and our 1990 plans — measure for measure:

External Customer Satisfaction



Jim Craig
Staff Sponsor



Pat Conroy
Staff Sponsor

CURRENT STATUS:

- Completed a customer satisfaction survey of our utility and industrial customers
- Compiled a list of improvement opportunities.
- Identified specific areas of customer dissatisfaction within PGBU
- Identified our customer communication process as the only area of concern that is not addressed by another QIT

PLANS FOR 1990:

- Present the customer satisfaction survey results to all departments within the Business Unit
- Establish specific action plans for improvement opportunities.
- Establish an effective customer communication process to assure accurate and timely 2-way communications
- Establish measurements to track the effectiveness of our customer action plans and communication processes
- Monitor those QIT actions which address other areas for improvement.
- Establish a process that defines, measures and uses customer value comparisons for continuous improvement.

Internal Customer Satisfaction



Joe McWhertor
Staff Sponsor

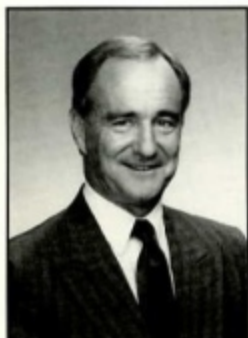
CURRENT STATUS:

- QIT formed with representatives from key Business Unit functions
- Sub-QITs addressed internal customer process, measurement and culture
- Presented implementation plan with recommendations for training, communications, recognition and measurement
- Plan approved and QIT charged to lead implementation

PLANS FOR 1990:

- Establish the process model as the standard for internal customer satisfaction
- Develop a comprehensive training module
- Develop and implement a detailed action plan for measurement process
- Expand QIT membership
- Promote internal customer recognition by enhancing existing recognition processes

On-Time Performance



Howard Pierce
Staff Sponsor



Paul Loch
Staff Sponsor

CURRENT STATUS:

- QIT organized with representatives from major functions
- QIT was directed to have umbrella view over supporting QITs
- Constructed Cause & Effect Diagram to define performance improvement areas
- Formed 2 major support QITs:
 - Order Management
 - Technical Information Integrity

PLANS FOR 1990:

- Analyze Cause & Effect Diagram to determine the causes addressed by:
 - Order Management QIT
 - Technical Information Integrity QIT
 - Quality of Orders QIT
 - Internal Customer Satisfaction QIT
 - Functional Quality Improvement Plans
- Initiate additional QITs as needed to address remaining causes
- Monitor progress of improvement actions
- Implement plans to measure performance

Availability/Forced Outage Rate



Nick Bartol
Staff Sponsor

CURRENT STATUS:

- Established Business Unit measures for steam and combustion turbines and electric generators
- Issued monthly reports to document overall statistics and detail break-outs of individual components to assist root-cause analyses
- Maintained world-class measurement results for steam turbines and generators for the past 3 years

PLANS FOR 1990:

- Continue positive review of outage/availability data to improve component operation and design features
- Integrate steam and gas turbine reports
- Identify formal communications plans for positive data distribution
- Develop a pro-active methodology on Forced Outages

Quality of Orders-Operating Plant



Don White
Staff Sponsor

CURRENT STATUS:

- Defined a quality order
- Documented the current front-end process
- Categorized the process into 4 discrete activity segments
- Conducted preliminary survey and analyzed results
- Identified 43 improvement opportunities which were incorporated into a final survey

PLANS FOR 1990:

- Analyze new survey results
- Select segment with the most significant impact
- Follow 7 step process for improvement projects
- Identify opportunities for improvement
- Monitor success of corrective actions
- Sponsor spin-off QITs

Quality of Orders - Projects



Romano Salvatori
Staff Sponsor

CURRENT STATUS:

- Established a QIT with representatives from all PGPD departments
- Set QIT objective to define methodology for tracking, measuring and controlling the quality of PGPD orders
- Focused efforts on 4 phases of PGPD orders:
 - Bid process
 - Negotiations
 - Transfer
 - Implementation

- Developed process flow diagrams to identify measurement criteria

PLANS FOR 1990:

- Develop a procedure for implementing our measurement criteria
- Implement the measurement process
- Track measurement results and modify the methodology as necessary to achieve our objectives
- Utilize measurement results to identify opportunities for performance improvement

Suspense Receivables



Don White
Staff Sponsor



Bob Daigle
Staff Sponsor

CURRENT STATUS:

- Identified suspense receivables as a quality success measure
- Established a QIT with key commercial and controller representatives
- Implemented cause codes to facilitate tracking and analysis

PLANS FOR 1990:

- Address the accounts receivables performance
- Key on suspense receivables
- Determine the roles of each organization involved
- Identify the root causes and responsibilities for resolution
- Track and monitor our performance results



Cost of Non-Conformance



Art Vedner
Staff Sponsor

CURRENT STATUS:

- Reviewed the COQ Report elements to provide a meaningful measurement of costs
- Established 25 COQ elements to ensure consistent and accurate data throughout PGBU
- Published monthly COQ Reports and identified areas for improvement
- 1989 reduction in non-conformance: 12.4% of non-conformance dollars

PLANS FOR 1990:

- Analyze data and identify opportunities for improvement
- Sponsor spin-off QITs
- Follow root-cause problem elimination
- Communicate the cost-of-quality through associate training
- Publicize success stories related to reducing nonconformance
- Target reduction in non-conformance: 35% as a percent of sales

Cycle Time



Bob Daigle
Staff Sponsor



Paul Loch
Staff Sponsor

CURRENT STATUS:

- Established cost/time sub-committees
- Identified and developed cost/time models for 7 major programs
- Provided training in cost/time modeling techniques
- Identified goals and objectives
- Developed measurement and communication requirements

PLANS FOR 1990:

- Develop target reduction plans for each major cost/time program
- Identify processes and facilities to reach targets
- Provide visibility of and support for corrective action
- Communicate and implement measures
- Identify and sponsor additional cost/time projects
- Provide required training and support
- Communicate the business strategy of cost/time management
- Review and revise targets

Warranty/Deficiency



CURRENT STATUS:

- Compiled warranty/deficiency claims from 1980 through 1990 for root cause analyses; and identified major root contributors and sources
- Reviewed and audited current procedures and methodologies
- Established measures and Business Unit goals for 1990-91

PLANS FOR 1990:

- Complete process evaluations to identify root causes and effective solutions
- Finalize audit procedures of 8 deficiencies and warranties over \$100K to evaluate current management processes
- Develop a simplified process procedure to address Limits of Authority and root cause identification issues



Our Roles & Responsibilities

Our functional organizations are designed to make Total Quality happen. Each department is focused on the implementation of specific quality improvement initiatives— from preparing plans and initiating projects to enhancing procedures for training, communications and recognition.

Our Organizational Objectives

Every department is responsible for establishing a Quality Improvement plan to help direct the effective implementation of our Total Quality process in 1990. The following break-outs are responsive to the Business Unit's strategic plan and illustrate the key objectives of each functional department in relation to the four Quality Imperatives.



Power Generation Commercial Operations Division

Our 1990 Quality Improvement Plan focuses on a variety of initiatives, including response to customer feedback, upgrading internal processes, communicating and fulfilling customer requirements and achieving our "supplier of preference" goal.



Rose Mustico



Seward Jones

Customer Orientation

- Develop plans to address the areas for improved performance indicated in the customer survey
- Create a process for continuously updating the database for periods between major customer satisfaction surveys
- Establish a process to use customer value comparisons for continuous improvement
- Establish an enhanced process to obtain customer feedback on the Business Unit's performance
- Increase the awareness of PGBU products and services through advertising

Human Resource Excellence

- Conduct a training needs analysis for PGCOD
- Establish the necessary training courses to address our needs
- Train QIT members in the 7-Step Quality Improvement Process

Product/Process Leadership

- Establish a new customer feedback process that includes thorough analysis and effective communications
- Create a new process for obtaining faster feedback on proposals
- Improve the procedures for turnover of the final commercial package to the implementing divisions
- Establish a traceable process to ensure that our proposals are complete, accurate, on-time and effective in promoting our competitive advantages
- Implement the marketing aspects of the order management process enhancements
- Improve our on-time delivery of visual and graphic communications, with a goal of 100%

Management Leadership

- Provide leadership to ensure that all roles in enhancement of our order management process are accomplished
- Re-establish the Accounts Receivables QIT to key improvements in suspense receivables and upgrade the Total Quality process
- Communicate the vital issues of Total Quality in Power Focus:
 - Explain Total Quality as the driving force toward becoming the supplier of preference
 - Promote "Pride" as the necessary mindset of each PGBU employee
 - Discuss our Engineering Excellence

Power Generation Projects Division

We have established our Quality Improvement Plan to support the development of our processes and promote the rapid growth of our activities.



Carole Bohlken



Rick Francis

(L - R) Chris Balzano
Salvador Gonzalez

Customer Orientation

- Develop and implement a customer satisfaction bulletin that will enhance exposure to and understanding of our customer satisfaction concepts
- Plan and present a one-day seminar to train employees on the process to implement our customer satisfaction concepts
- Conduct a systematic evaluation of customer feedback after order awards

Human Resource Excellence

- Develop and implement activities to enhance the QIT process
- Implement weekly general manager staff meetings
- Implement monthly round-table meetings with small groups to facilitate feedback
- Implement quarterly meetings for all employees
- Develop and implement our General Manager Certificate of Appreciation Award Program

Product/Process Leadership

- Implement the RAM process on FPL's Lauderdale Repowering Project to achieve customer satisfaction and reduce the cost of quality
- Establish combustion turbine performance that is globally competitive
- Establish a thorough process to transfer orders from Marketing to the implementing groups
- Develop and implement a marketing strategy to include the RAM process in future negotiations
- Enhance the use of market and competitive analysis in forming strategies for negotiations

Management Leadership

- Enhance the implementation of our Quality Council process
- Provide active support for all Quality Success Measures by participating in and providing resources for the assigned cross-functional QITs
- Conduct the first Total Quality Fitness Review and develop plans to use the feedback for continued improvement
- Support the evolution of a Total Quality culture by consistent management behavior that sets the example and has high expectations



Power Generation Service Division

Our 1990 Quality Improvement Plan summarizes the projects and activities that respond to the areas of greatest opportunity for improvement, as indicated by the Fitness Review.



(L - R) Lou Nash
Barbara Foster



Chuck LaRue



Alan Marfin

Customer Orientation

- Initiate a plan to increase the awareness of our employees in the nature and importance of internal customer satisfaction

Human Resource Excellence

- Develop a management development program for new first-level managers and high-potential professionals
- Conduct Total Quality process training for all Division employees
- Establish and implement policies that minimize employee "burn-out" by controlling overtime and consecutive days worked; and by enhancing the versatility of our employees

Product/Process Leadership

- Develop a unified policy for the communication of technical requirements that will be utilized by all product lines
- Develop a policy that defines the conditions under which procedure/process qualification must be implemented, and the appropriate methods to be utilized for various levels

Management Leadership

- Identify 6 business-, customer- or employee-related measures that can be monitored on a monthly basis for each department
- Revitalize the PMS process for all employees
- Develop and implement requirements for outage readiness reviews so that appropriate planning is done for all contracts

Engineering (PGTSOD)

Our Quality Improvement Plan has been developed to enhance our pursuit of Engineering's primary function, which is to specify product configuration and process parameters that result in competitive products and satisfy contract commitments.



(L - R) Mike Johnson
Roger Heinig



(L-R) Matthew Harrison
Al Obley
Bob Ralph

Customer Orientation

- Utilize the PGBU customer survey results to implement programs designed to address specific issues
- Evaluate results and identify areas of opportunity
- Identify action plans and establish a QIT for implementation

Human Resource Excellence

- Expand the Skills Training Program
- Implement recommendations from Motivation QIT
- Implement recommendations from Training QIT
- Review customized and documented training plans for each Engineering associate with PMS process
- Implement recommendations from Recognition QIT

Product/Process Leadership

- Continue the successful Engineering Issues and Concerns Program, and expand it to cover less critical technical concerns
- Implement Cost Improvement QIT recommendations to realize lower costs and shorter cycle times on major components
- Initiate QIT to address standardization of department design procedures and processes
- Improve drawing accuracy by standardized D-specs, expanded usage of master format drawings and reduction of changes
- Develop and implement a plan so that all technical information issued to users is timely, accurate, consistent with requirements and readily understandable
- Develop action plans to address twelve (12) critical issues associated with process specification improvements

Management Leadership

- Develop individual quality improvement plans — including issues associated with personnel, process, facilities, schedule, priority and measurement methods — for each Engineering staff department
- Use a participatory approach to address the key issues from the Total Quality Fitness Review



Fort Payne Plant (PGMOD)

Our Quality Improvement Plan focuses on the major programs and issues that will generate significant improvements for all plant operations.



Phillip Hooks



Darrell Kelley

Customer Orientation

- Establish a QIT to focus on the issues that impact our customers, especially those in Charlotte and Pensacola
- Maintain the visibility of all active customer issues
- Plan and implement a program to address all customer issues

Human Resource Excellence

- Maintain the QIT approach of our manufacturing sections
- Focus new training on statistical process controls, blueprint reading, systems, department interactions, product knowledge, geometric tolerancing and the Total Quality process
- Design a new recognition and awareness program that incorporates the Business Unit and Corporate awards

Product/Process Leadership

- Complete power-factor tip-up project
- Enhance coil shaping and sizing processes
- Enhance exciter/phase lead manufacture
- Introduce new machinery and methods
- Expand operator inspection/accountability
- Improve manufacturing information processes

Management Leadership

- Conduct weekly progress reports within the Council
- Establish a total plant and department performance measurement process
- Design and implement an internal audit and review process

Winston-Salem Plant (PGMOD)

Our objective for 1990 is to improve Total Quality and have a positive and significant impact on our plant performance measures.



Joanne Glenn



John Harrison



(L-R)
Scotty East
Donnie Bullins



James Hines

Customer Orientation

- Plan, develop and administer activities to improve external customer satisfaction
- Increase focus on internal customer satisfaction

Human Resource Excellence

- Manage and promote the process of recognizing employees, subcontractors and suppliers for their quality contributions
- Develop a comprehensive Total Quality training requirements plan

Product/Process Leadership

- Promote the effective use of statistics as an integral and self-sufficient part of the Total Quality process
- Develop partnering arrangements with key suppliers
- Implement the parallel blade FMS and CIM slice to improve cost/time product profile
- Define and establish support for combustion turbine manufacturing
- Expand CIM cell effort
- Improve information and communication capabilities by enhancing computer applications, bill of materials, order management and procedures
- Improve process yield by focusing on nonconformance elimination, release point yield measurement and a SIM process on component parts
- Enhance measurement and testing capabilities

Management Leadership

- Structure the Total Quality Council to identify, sponsor, provide resources, determine priorities, and monitor the progress of quality improvement initiatives
- Establish Total Quality Councils in all staff level departments to help lead the quality improvement process elements
- Maintain multi-function sub-committees to focus efforts on recognition, customer orientation, statistics/process control, Total Quality training and supplier quality



Canadian Division (PGMOD)

Our Quality Improvement plan focuses on the creation of superior value by maximizing the effective utilization of available facilities, human resource talent and the Total Quality process to satisfy the needs of our customers.



Bill Sorley



Dan Lusted



Ivan Jazvac



Graeme Beckett

Customer Orientation

- Address the key opportunities identified in the recent customer survey, with initial priority on improved on-time delivery performance and reduced order lead times
- Conduct additional customer surveys on a regular basis

Human Resource Excellence

- Establish a program to recognize outstanding contributions to Total Quality improvement
- Involve our employees at all levels in QITs and other activities that address quality improvement initiatives

Product/Process Leadership

- Manage current QITs that address the following:
 - Value improvement
 - Blade handling
 - CW251 B12 value engineering
 - Small steam cycle/quality improvement
 - Major steam service orders
 - Inventory reductions
 - Order visibility
- Form additional QITs in 1990 to address improvement in on-time delivery and reduction in lead time and the rate of nonconformance
- Initiate a project to improve manufacturing information

Management Leadership

- Establish a Total Quality Council to direct the implementation of the Total Quality process
- Develop plans to address the results of the Total Quality Fitness Review, and plan a follow-up to assess our progress
- Establish a quantitative measurement system to monitor progress in quality improvement

Pensacola Plant (PGMOD)

The Quality Improvement Initiatives we have defined for 1990 target the elements represented by the Total Quality Imperatives.



Dorothy Pope



Willie Donahoo



(L-R) Jim Shirley
Jack Barberi

Customer Orientation

- Improve on-time shipping performance
- Improve customer feedback process
- Improve implementation of contract changes
- Improve project cost visibility

Human Resource Excellence

- Implement a requirements and skills training program
- Coordinate a recognition program for outstanding performance
- Improve individual task ownership and responsibility

Product/Process Leadership

- Achieve an effective start-up of Combustion Turbine operations
- Establish a base point for accurate shop standards
- Implement real-time radioscopy
- Expand the implementation of shop floor control process
- Implement MI function
- Implement a supplier rating excellence process
- Improve storeroom and inventory controls

Management Leadership

- Enhance communications with a strategic plan and a Total Quality process
- Continue Total Quality performance measures to implement quality trend indicators, customer satisfaction, error prevention and an annual TQ Fitness Review



Charlotte Plant (PGMOD)

Our 1990 Quality Improvement Plan was developed in a matrix format that addresses both the Total Quality Imperatives and the major improvement needs identified by our management team.



Ron Davis



Ken Bailey



Russ Kincaid

Customer Orientation

- Address the key opportunities from the customer survey
- Utilize new technology to reduce lead times
- Resolve chronic detractors that impact lead time and delivery
- Increase customer contact
- Initiate more up-front preparation for work on customer orders

Human Resource Excellence

- Increase employee effectiveness by implementing a comprehensive training approach to address the needs of all employees
- Train personnel on new technology
- Facilitate a training program for problem-solving and QIT leadership
- Document all operator errors and 545 expenditures to enhance analysis and corrective action
- Stress quality, root-cause analysis and the 7-step process in all employee participation in improvement initiatives

Product/Process Leadership

- Achieve expenditure objectives by maintaining good visibility of costs, initiating cost improvements and controlling inventory
- Upgrade existing facilities and technology, and develop new technology to be responsive to the business needs
- Develop and implement plans that meet the business needs for Charlotte's role in Combustion Turbine manufacturing
- Re-energize the initiatives in Statistical Process Control
- Increase efforts toward developing closer relationships with suppliers

Management Leadership

- Improve performance in the cost of non-conformance through good planning and the amount of required overtime
- Enhance employee satisfaction through a series of initiatives that include leadership meetings, increased participation, emphasis on safety and housekeeping, and regular performance reviews
- Improve the plant's effectiveness through stronger preventive maintenance measures
- Improve plant staffing levels through a better understanding of the business, proper training and improved quality
- Devise programs and communications that will improve the plant's outside customer image

Materials (PGMOD)

Our 1990 Quality Improvement Plan is directed toward providing 100% on-time, complete and accurate deliverables to our customers.



Pat Shannon



Jad Jacob

Customer Orientation

- Improve our delivery performance to external customers and achieve a 94% on-time rate for 1990
- Improve our delivery performance to internal customers and achieve a 90% on-time rate for 1990
- Improve customer service by reducing FAST processing errors from .3% to .1%

Human Resource Excellence

- Use the Total Quality Fitness Review as a tool to promote employee participation in the quality process
- Develop and implement a cost/time management training program for all PGMOD locations
- Develop and implement a training plan that addresses each department's individual employee training needs

Product/Process Leadership

- Provide manufacturing technical leadership to define and reduce generator ICS
- Establish a Materials Planning function to fulfill requirements of the order management process
- Manage supplier quality to achieve nonconformance costs of less than one-half of 1% of dollars purchased; and fewer than 4% of the items purchased that now require an MDR
- Provide a sufficient number of qualified suppliers to meet needs
- Define and develop a process for "kitting" at FAST to improve the timely delivery of products
- Establish joint Westinghouse/supplier QITs to address key improvement opportunities

Management Leadership

- Foster the QIT process through the initiation of teams, employee participation and progress measurements
- Conduct quarterly meetings for all employees to open two-way communications on major performance issues and concerns

Combustion Turbine Integrated Manufacturing (PGMOD)

We will utilize the proven designs and capabilities of several Business Unit facilities to achieve superior quality for the manufacture of combustion turbines.



(L - R) Roger Greenwood
Larry Wood

Customer Orientation

- Integrate past product successes with the strengths of participating Functions to satisfy customer expectations

Human Resource Excellence

- Apply the Business Unit's considerable combustion turbine experience and knowledge to maximize our implementation process

Product/Process Leadership

- Apply the Process Approval Evaluation technique to key components and the assembly to maximize the manufacturing process
- Reinstate the Change Impact Analysis process to analyze the impact of changes and manage their implementation

Management Leadership

- Integrate consistent, on-line communication systems — such as Order Management, TOPAS and MDR — with all organizational processes to eliminate the barriers caused by time and distance

Business Unit Controller

This 1990 Quality Improvement Plan identifies specific programs to support the Business Unit's Total Quality goals.



(L-R) Gary Bushey
Don Dettmore



Henry Demps



Linda Cheatum

Customer Orientation

- Develop a process to determine the status of all customer settlement agreements on a timely basis; and to assure Westinghouse adherence to contractual obligations
- Introduce new application development tools to reduce the project lead times for Information Systems

Human Resource Excellence

- Improve the effectiveness of personal computer usage through the development of special training courses
- Upgrade the safeguarding of computer data by training the user community

Product/Process Leadership

- Complete a physical inventory of all equipment now located in Orlando; reconcile it with financial records, and make the required book adjustments
- Implement a plan to enhance financial reporting by using a needs survey to identify items for implementation
- Optimize the process of financial planning and realize the benefits in terms of efficiencies and productivity
- Use Information Systems Quality Committee to maintain up-to-date policies, procedures and standards
- Revise the system for controlling and reporting costs regarding Information Systems activities
- Improve the credit process for unused airline tickets

Management Leadership

- Develop and implement a process for maintaining a current complete file of all management Limits of Authority, with a sample of their respective signatures
- Implement specific measures in Information Systems to track progress and take corrective actions against on-line failures, batch failures, transaction response time, systems availability and analyst time applied to nonconformance tasks
- Provide improved project management of the Information Systems application planning process

Business Unit Human Resources

Our 1990 Quality Improvement Plan focuses on supporting the human resources, facility and administration needs of the Business Unit in a manner that fits with the initiatives of our Total Quality process.



(L - R) Don Gilmore
Carole DelVecchio
Ray Zimmerman



(L-R) Carol Jackson
Steve Mizell

Customer Orientation

- Implement the initiatives of the QIT on internal customer satisfaction
- Meet the facility requirements in support of PGPD's expansion
- Implement internal customer satisfaction evaluation(s) and action plan(s) in relation to Human Resource services and Facility/ Administration

Human Resource Excellence

- Provide the necessary quantity and quality of applicants to meet the organization's staffing needs, with special emphasis on Affirmative Action candidates
- Further enhance the Business Unit's participation and leadership in conducting salary surveys which assure appropriate competitive pay data

Product/Process Leadership

- Improve the administration of benefits to employees at remote locations by consolidating the process in Orlando
- Design and implement an audit system to improve the quality of data in PRISM
- Complete the QIT for publishing and implement its recommendations
- Refine and implement the results of the Career Opportunity Advertising System in Orlando

Management Leadership

- Enhance the Orlando facility's involvement with the local community
- Provide leadership and support to the Business Unit's centers of technical expertise
- Create and implement a cost awareness program on administrative support services
- Support the Business Unit's submittal of the application for the George Westinghouse Total Quality Award

Business Unit Total Quality

Our 1990 Quality Improvement Plan is structured to drive the implementation of the Total Quality process.



Dave Dickerson



(L-R) Jim Dunmire
Tony Fascenda

Customer Orientation

- Carry the Total Quality message to key customers in meetings, conferences and one-on-one situations
- Promote the understanding and enhancement of the internal customer concept
- Improve the FPL perception of our quality performance and achieve "Quality Vendor" status
- Work with selected customers to help establish their Total Quality process

Human Resource Excellence

- Complete and begin implementation of the Business Unit's training plan
- Enhance the use and value of QITs in the Total Quality process
- Implement the Quality Improvement Change Request (QICR) system to generate quality improvement ideas
- Develop and implement a Total Quality Recognition Week throughout the Business Unit

Product/Process Leadership

- Develop an expanded source assurance plan to encompass Power Plant Projects, Combustion Turbine and Canada
- Continue toward the goal of 100% operator verification and accountability at the plants
- Enhance the use of Statistical Process Control (SPC) and other process control methods

Management Leadership

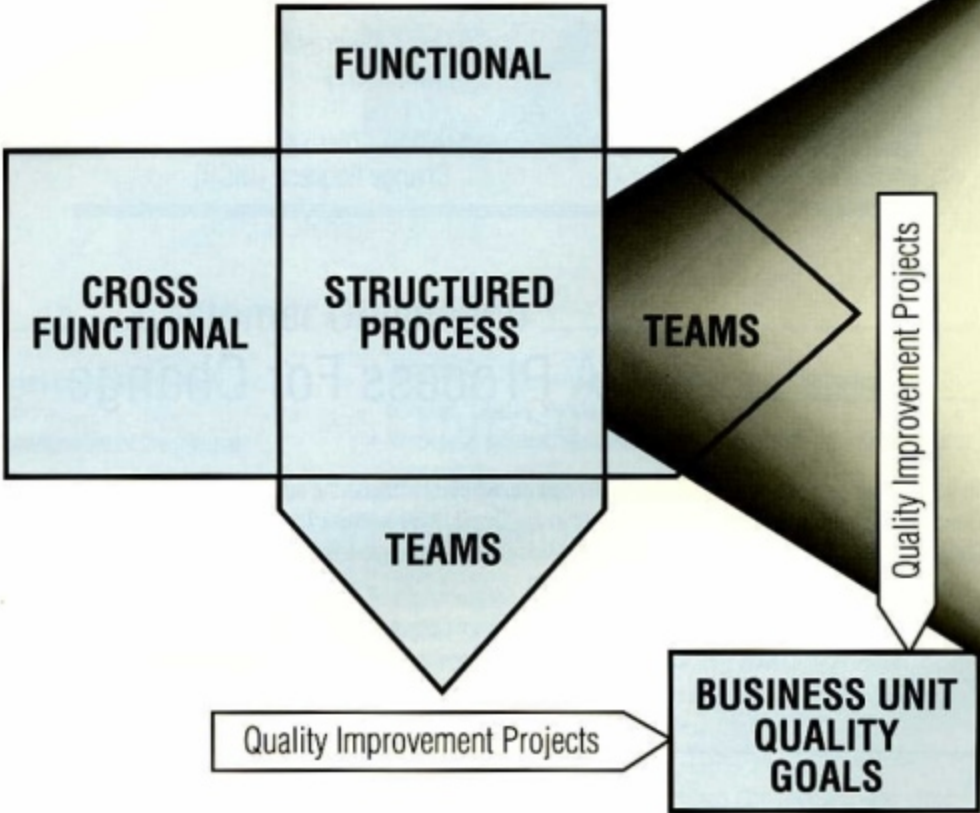
- Prepare PGBU's application for the George Westinghouse Total Quality Award in the "Most Improved" category
- Coordinate the initiatives to reduce the cost of nonconformance
- Develop, consolidate and publish the Business Unit's Quality Improvement Plans for 1990
- Complete the Total Quality Fitness Reviews
- Develop and issue a report of the Business Unit's Quality Success Measures



A Process For Change

To achieve our goal of creating a Total Quality culture, we must increase the active participation of the entire Power Generation Business Unit. Our objective is to inspire greater involvement in our Quality Improvement Teams (QIT) while implementing our new Quality Improvement Change Request (QICR) process to solicit ideas from all employees to enhance quality within their departments.

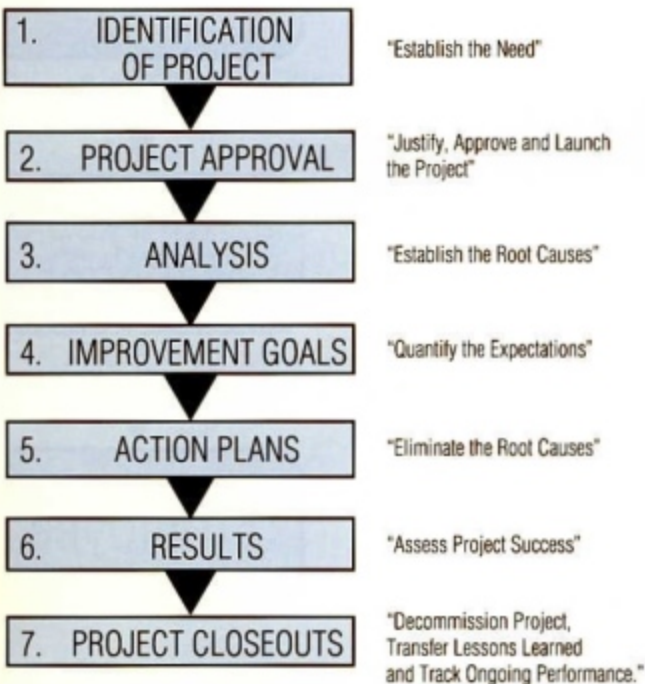
QUALITY IMPROVEMENT





VEEMENT TEAMS

PROCESS FOR QUALITY IMPROVEMENT TEAMS



A network of cross-functional Quality Improvement Teams and functional Quality Improvement Teams has been established to address the issues of Total Quality. These teams are being formed at all levels within the organizational structure. Our goal is to achieve excellent participation in all vital improvement activities.

This chart illustrates how the organization uses the formal process for implementing new projects to help us realize our goal of Supplier of Preference.

By taking a clear and disciplined approach to the Quality Improvement process, QITs can identify and eliminate a problem's root cause. In order to accomplish this, a 7-Step Process has been developed for implementing Quality Improvement projects. Summarized here, this disciplined and structured process emphasizes the use of facts and logic to maximize the probability of success.

QUALITY IMPROVEMENT

The new Quality Improvement Change Request (QICR) has been implemented to establish a simple process by which any employee can participate in our Total Quality journey.

QICR NO: _____	
Ⓜ Power Generation Quality Improvement Change Request	
Name _____ Date _____ Your Manager's Name _____	
Dept _____ Mail Code _____ Phone No. _____	
EMPLOYEE SECTION <i>State your request which will improve the quality of our products or services or will allow you or your fellow employees to do the right job right the first time</i> _____ _____ _____ _____ _____ _____ _____ _____	
MANAGER'S SECTION <i>Manager's answer or comments on action to be taken on the above request</i> <input type="checkbox"/> Accepted for Implementation <input type="checkbox"/> Returned with Comment Comments: _____ _____ _____	
Manager's Signature _____	Date _____
<input type="checkbox"/> Implementation Completed Projected Benefits: _____ _____ _____	
Manager's Signature _____	Date _____
<small>White — Manager's Copy Canary — Employee's Copy Blue — Total Quality's Copy</small>	





CHANGE REQUESTS

You are encouraged to submit any request that may result in a positive change in the quality of your products and services within your department or that could improve our ability to do the job right the first time.

THE EMPLOYEE:

- Submits QICR to immediate manager

THE MANAGER:

- Responds to employee in two working days
- Accepts QICR for implementation
 - or —
- Returns QICR with comment
- Implements accepted QICR

THE EMPLOYEE:

- Receives feedback from manager
- Receives recognition for accepted QICR

These People Made a Difference ...
So can you!



Marie Williams



Tim Driver



Buck Pfaff



Joel Sheppard



Frank Artusa



We Have the Power

To successfully achieve our world-class goals, the Total Quality process must be continuously evaluated, refined and improved. It must be fully integrated throughout the entire Business Unit. And individually accepted as a way of life by each and every employee.

For ultimately, the result of our Total Quality process must be the emergence of a Total Quality culture.

This realization will enable us to progress throughout the next decade and on into the 21st century.

And truly become the Supplier of Preference.



PG&E
POWER GENERATION BUSINESS UNIT