Total Quality Management

It’s Working!!!

History of TQM at RUST
Let’s Turn Back

to 1989 . . . .

Internal Business Challenges

◆ Mixed project execution
◆ People conflicts
◆ Fire drills
◆ Sales results below plan
◆ Weak financial performance
◆ Unhappy clients
Solution

“Fix the Problems”

Fixing the Problems Through Training

- Project Management
- Accounting for non-accountants
- Proposal writing
- Interviewing
- Conflict resolution
- Negotiating
- Client relations
- etc.
Fixing The Problems

Training Results

♦ Not organization-wide
♦ Few staff impacted
♦ Mixed messages on “what’s important”
♦ Minimal improvement in performance
Fixing the Problems

Conclusion . . . .

We needed to address the root cause of issues.....and,

“Change our organization’s culture toward continued improvement of internal/external processes”
Selected

Phil Crosby Associates
Quality Education System

Trained All Managers

Crosby Quality College

Executive Committee
Region Managers
Division Managers
Facilitators
Trained All Staff

20 hour  
16 hour  
6 hour  
Refresher

Named Our Process

QUALITY THROUGH TEAM WORK
Defined Quality

"Meeting clearly defined, agreed-upon requirements...every time."

Established a Quality Policy

RUST
Environment & Infrastructure is dedicated to providing quality services.

We will provide these services to clients and fellow employees, conforming to clearly defined, agreed-upon requirements every time.
Established A Quality Organization

♦ Corporate - Quality Steering Committee
♦ Region - Region Quality Improvement Team
♦ Division - Local Quality Improvement Team

Established Formal Improvement Processes (Discipline!)

♦ Opportunities for Improvement (OFI) (Local)
♦ Quality Action teams (QAT) (Region - Corporate)
OFI Flow Diagram

Results of Implementing the TQM Process
Local Process Improvements (OFI)

- Improved collection of receivables
- Better use of computer resources
- Development of a hand cart for construction inspectors
- Improved process for acquisition of office supplies
- Training issues (CAD, Computer, Safety)

Corporate Process Improvements (QAT)

- Uniform graphic standards
- Correspondence formats
- Monthly financial project reviews
- Printing
- Customer Project Feedback
QT$^2$ With Clients

- Solid Waste - WMI
- Sewer Rehabilitation - Miami
- Charter Steel - Design Build
- Chrysler - National Programs
- Transportation - Wisconsin DOT

We also Measure Costs to Monitor QT$^2$ Progress
Price of Non-Conformance (PONC)

- Project cost overruns
- Claims
- Non-compensated rework
- Employee turnover - voluntary
- Bad debts
- Interest Expense

PONC as Percent of Engineering Fees

[Graph showing the percentage of PONC over the years from 1990 to 1996]
Impact of QT$^2$ to Date

- Staff currently heading up local quality organizations
- Transforming organization's culture
- Fewer skeptics - more active support
- Staff empowerment happening
- Realized time and $ savings
- Improved customer relations

Current Challenges with Continuation of QT$^2$
We’ve Reached A
Currently Reinvigorating

Work Out

Training

Process Improvement Teams

$QT^2$

Individual/Local Driven

OFI → Workout Process

Five Workout Steps
- Target opportunities and form teams
- Brainstorm and sort ideas
- TAKE ACTION!
- Document results
- Celebrate success
QATs

Corporate Driven

Process Improvement Teams

- Identify Opportunity for Improvement
- Establish Commitment and Teams
- Analyze
  - Query Customers
  - Benchmark
- Develop Solutions/Measurements
- Pilot/Rollout Solution

Rust PIT
Small Project Administration

- Identify an opportunity for improvement
  - Small Projects = 45% of active projects
  - Produce 8% of revenues
  - Small projects lead to larger projects

- Analyze the Process - Use same administrative procedures as large project

- Listen to Customer - 133 steps, Excessive forms, approvals & administrative delays
Rust PIT
Small Project Administration (cont’d)

◆ Benchmark
  ♦ Bank One
  ♦ Northwestern Bell
  ♦ Amoco

◆ Develop Solutions
  ♦ Delegate to PM, signature authority
  ♦ Streamline project setup paperwork
  ♦ One invoice, include with deliverable

Rust PIT
Small Project Administration (cont’d)

◆ Measure
  ♦ PMs save 50% of project setup time
  ♦ Management saves 50% approval time
  ♦ Accounting saves 33% of administrative project time
  ♦ Improves response time to client

◆ Pilot/Rollout the Solution
  ♦ Piloted in Houston & Minneapolis
  ♦ Rollout in 1997 as Business Improvement Initiative
Current Project
Administrative Procedure

Currently 133 Steps

New Project
Administrative Procedure

Reduced to 59 Steps
Small Project PIT
Estimated Cost Savings

$1,000,000

Keys For Success

♦ Select a program and stick with it!
♦ Management Commitment
♦ Train all staff
♦ Disciplined process (OFI, QAT, etc.)
♦ All staff involved
♦ Recognition and reinforcement
♦ Hard, hard, hard work!!
Total Quality Management

Really

It's Working!!!