TOTAL QUALITY MANAGEMENT
IS IT REAL? ------- IS IT OF VALUE?

Mike Graff
3M Quality Management Services
St. Paul, Minnesota

1993 HIGHLIGHTS

• Fortune Magazine's Most Admired Companies List
• Among Most Innovative Companies (Fortune List)
• 100 Best Companies to Work for in America
• 100 Best Companies for Working Mothers
• Several Environmental and Quality Awards
Corporate Quality Services

- Internal Quality Consulting
- Quality Management Services

D WORDS
- Deficit Reduction
- Downsizing

R WORDS
- Restructuring
- Reorganizing
- Reinventing
- Rightsizing
CUSTOMER FOCUS

• Customer-Driven Government

MAIN POINTS

1. What We Learned
2. Applications of Managing Total Quality in a 3M Operating Division
3. Application in a State Highway Division
4. The Value of Managing Total Quality

MAIN POINTS

Why?
What?
How?
1. Emphasizes Empowerment

2. Promotes Open Decision Making

3. Ties in Business Decisions to the Expectations of Customers

"I am Convinced that if the Rate of Change Inside an Institution is Less than the Rate of Change Outside, the End is in Sight"

John F. Welch
Chairman and Chief Executive Officer
General Electric

TOTAL QUALITY MANAGEMENT

A Process Designed to Focus on Customer Expectations, Preventing Problems, Building Commitment to Quality in the Workforce, and Promoting Open Decision Making
"Learn from mistakes of others - you can’t live long enough to make them all yourself."

From a Chinese Fortune Cookie

WHAT WE LEARNED

• The Quality Process Requires Change
• Management Must Lead
• Emphasize Processes Within Which People Work
• A Specific Process Model Cannot be Transplanted
• Internal People Best Facilitators
• The Annual Plan Drives the Improvement Process
• Follow-up is a Key
• The Process Must be Driven by the Customers’ Expectations
3M/TCM Mission

Traffic Control Materials Division exists to serve the needs and exceed the expectations of our customers worldwide. As an innovative growth division, TCM is responsive to our customers through people, technologies and financial resources.

TCM Division is successful in achieving our goals as we consistently satisfy the goals of our customers. TCM Division earns operating income and return on investment consistent with the value of products and services provided to our customers.

Together with our customers, TCM Division aggressively seeks a shared vision of the future, and therefore performs consistently as a market leader in the transportation safety industry.

By the People of TCM Division

3M/TCM Vision

To be Judged by Our Customers Worldwide as the Best Supplier Serving the Transportation Safety Industry, by Consistently Providing the Highest Value Products and Services

By the People of TCM Division
3M TCM Operating Principles and Goals

✓ People committed to continuous improvement
✓ Customer driven (and meaning it)
✓ Team oriented (and meaning it)
✓ Strength in every function...
   Balance overall
✓ in every sense
✓ Specific goals that can be communicated easily and measured in practical ways
✓ Responsive, ethical and productive citizen (a citizen to be proud of)

Traffic Control Materials Division
December 1991
The Effective Organization

- Clear direction
- Good plans/objectives
- Consistent communications
- Balanced team
- Energy...excitement
- A "oneness" in the eyes of the customer!
- Doing it!

ANNUAL IMPROVEMENT PLAN

<table>
<thead>
<tr>
<th>Mission</th>
<th>What Business We are in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>What We Want to be in That Business</td>
</tr>
<tr>
<td>Quality Policy</td>
<td>What We Value to Achieve the Vision</td>
</tr>
<tr>
<td>Critical Success Factors</td>
<td>Outcomes That Must Be Achieved In Order to Attain the Vision</td>
</tr>
<tr>
<td>Evidence of Success</td>
<td>Measures of Vision and Critical Success Factor Attainment</td>
</tr>
<tr>
<td>Organization-Wide Action</td>
<td>What Improvement Areas Cross-Functional Teams Will Address to Put the Critical Success Factors in Place</td>
</tr>
<tr>
<td>Function Action</td>
<td>What Functional Improvements of Internal Processes Teams will Address</td>
</tr>
<tr>
<td>Management Review</td>
<td>What Progress Has Been Made Toward Achieving the Improvement Goals</td>
</tr>
</tbody>
</table>
The "Customer"

- Public Sector? - Private? - Government?
- Successful? - Vulnerable?
- Growth industry? - Mature?
- Profitable? - Struggling?
- Technology dependance?
- Quality of people?
- Turnover?
- Continuing education?
- Regulatory impact?
- Internal communications?
- Proprietary position?
- Distribution channels?
  - theirs? - Ours?
- "Unique" applications?
- Their competitive arena?
PRICE/VALUE

- Full Line Supplier
- Customer Service
- Technical Service
- Delivery
- Replacement Policy
- Returned Goods Policy
- Terms/Financing
- Customer Training/Assistance/Education Support
- Market Growth/Development
- Industry Involvement
- 3M Sales Representatives
INDUSTRY KEY SUCCESS FACTORS

1. Customer Satisfaction (Products & Services)
2. Government Relations and Coalition Network
3. Technological Leadership
5. Manufacturing Capacity and Effectiveness

The Effective Organization

✓ The inevitable starting point...
   - the customer
     • His needs
     • His expectations
     • His view of 3M

✓ The meaning of "Responsiveness"
✓ The sense of "Team"
✓ The commitment to "Balance"
✓ Those other words...
   • Respect
   • Trust
   • Excitement
   • Accountability
CULTURE WILL CHANGE

• When There is Dissatisfaction with the Present Condition
• When There is Vision of a Better Future
• When There is a Plan That Can Achieve the Vision

"PEOPLE WHO CARE, CREATING QUALITY TRANSPORTATION ... TODAY AND TOMORROW."

Wisconsin Division of Highways' Vision

PEOPLE

People are the Division of Highways' Biggest Asset
WHO CARE

Caring Implies Our Sense of Concern. Special Feelings and Actions Fostered by Caring are the Foundation of our Relationship with Customers and Fellow Workers

CREATING

"Creating" Means Each of Us Accepts the Responsibility to Look for New Ways to Do Our Business

QUALITY

Our Focus on Quality is One of the Strengths of Our Division and Continues to be a Foundation of Our Vision as We Look to the Future.
TRANSPORTATION

A Changing Wisconsin Population and Economy, New Environmental Priorities, Federal Laws, and the Unique Demands of Metropolitan Areas Call for a New Approach to Meet Our Transportation Needs

TODAY AND TOMORROW

Never Rest On Yesterday's Successes
WHY MTQ?

Proven Process:

- Focus on Change --- Meet Customer Expectations
- Organize Resources --- Focus on Prevention Specific Improvement
- Create Vision --- Work Force Commitment
- Value Employees --- Pride Committed Work Force

RESULTS

- 50% Reduction in Time-To-Market
- Increase in Product Quality with Concurrent Decrease in Manufacturing Costs
- Factory Cycle Time Reduction From 30 Days to 30 Minutes
- In-process Inventories From 600 Hours to 6 Hours
- Three-Fold Increase in Productivity
- Unit Output Per Square Foot Increased Six-Fold
- Etc...
Financial Rewards

- Continuous Improvement
- Increased Productivity
- Cost Reduction

ORGANIZATIONAL SITUATION ANALYSIS
CHANGED MANAGEMENT BEHAVIOR

From
Managing
Directing
Competing
Relying on Rules
Using Organizational Hierarchy
Consistency/Sameness
Secrecy
Passive
Isolated Decisions
People Costs

To
Leading
Guiding
Collaborating
Focus on the Process
Using a Network
Diversity/Flexibility
Openness/Sharing
Risk Taking
Involvement of Others
People Assets

TOTAL QUALITY

Customer Focus

Prevention Orientation

Total Quality

Empowered Employees

Continuous Improvement