Total Quality Safety Management
Introduction

Traditional safety management philosophy and practices have resulted in some reductions in accident rates nationally over the years, but it appears that further reductions will require new ideas. A shift in the way we think about safety is the answer.

As you might guess, the concepts and principles of continuous safety improvement find their home in the Total Quality Management movement and Continuous Quality Improvement.

Although Total Quality Management (TQM) and continuous quality improvement (CQI) ideas have been around for many years, their concepts and principles have not been generally applied to continuous safety improvement (CSI) as a management strategy in occupational safety and health. This workshop introduces CSI and helps you gain insight about how to successfully apply it to improve the effectiveness of your company’s injury and illness prevention program.

Workshop Goals:

At the end of this workshop you should:

1. Be familiar with the origins of the Total Quality Management movement and W. Edwards Deming’s contributions.

2. Be able to apply Deming’s 14 Points to workplace safety.

Form Safety Improvement Teams!

Introductions

Elect a Team Leader
Select a spokesperson
Name your Team
Deming on Safety

*Quality leadership demands continuous improvement in both the product or service, and the process that produces it.*

W. Edwards Deming was an internationally renowned consultant whose work led Japanese industry into principles of management and revolutionized their quality and productivity. He is author of *Out of The Crisis* (MIT/CAES Pub, ISBN 0-911379-01-0) and many other books and articles.

**Deming’s key points:**

- **Appreciate systems** - fix the system not the blame. Structure - inputs - processes - outputs

- **Understand variation** - special and common cause

- **Understand human psychology** - what motivates

- **Obtain profound knowledge** - based on facts, not feelings

- **Transform the individual** - the worker is more than a "unit of labor"
Use the organization charts above to contrast the characteristics of traditional management with that of a total quality management.

Traditional Organization

Describe communication channels:

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Describe internal working roles/relationships:

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Describe relationships with suppliers and customers

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Components of a Safety Management System

**Inputs - Resources from other systems**
- Tools
- Equipment
- Machinery
- Materials
- Facilities
- People
- Time
- Money

**Processes - Using available resources**
- Planning long/short term goals
- Leading and managing
- Educating and training everyone
- Identifying and analyzing data
- Rewarding excellence
- Disciplining non-compliance
- Suggesting, and recommending improvements
- Participating in safety committees, teams, project
- Evaluating conditions, behaviors, systems, results
- Correcting hazards
- Evaluating and Improving system weaknesses

**Outputs - Conditions, Behaviors, Results**
- Safe/Unsafe conditions
- Many/Few accidents
- High/Low morale, trust

- Safe/Unsafe behaviors
- High/Low costs/saving
- High/Low productivity

“A safety system is designed perfectly to produce what it is producing.”

Safety is 99% common sense.”

**Which principle above reflects a total quality safety management approach?**

**Where do we look for clues that safety management system design and/or implementation are flawed?**
All safety management systems have structure...

**Safety Manager** - Primarily manages and consults on OSHA mandated programs
List examples of processes and programs the safety coordinator would manage.
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**Safety Engineer** - Consults on and designs engineering controls to correct hazards.
List examples of hazards that might concern the safety engineer.
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**Human Resource Coordinator** - Manages and consults on HR-related processes and programs.
List examples:
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**Safety Committee** - identifies, analyzes, evaluates all safety and health processes and programs.
List examples:
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Safety is an attribute of process quality

Two Important Characteristics of a process

**Complexity**

Unnecessary work -- anything that makes a process more complicated. Does not add value to a product or service.

*What can occur that complicates the production or service process?*

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**Variation**

Inherent in all inputs, processes, and outputs. Any system that relies on human behavior is inherently unreliable. Two types of variation

**Common Causes** - reside in the system or process

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<tr>
<th>General</th>
<th>Predictable</th>
<th>Typical</th>
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**Special Causes** - reside in an individual, materials, specific machinery, tools, or equipment

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<tr>
<th>Unique</th>
<th>Unpredictable</th>
<th>Atypical</th>
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*Draw a line from the concept on the left to it's matching concept to the right.*

Surface cause  Common Cause

Root cause     Special Cause

*Give examples of special (surface) causes*

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*Give examples of common (root) causes*

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Applying Deming’s 14 Points to safety

Point 1. Create constancy of purpose for the improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.

An employer is responsible to both its community and its own workforce to maintain a high level of excellence and value. An employer must strive to maximize efficiency and effectiveness through constant improvement.

“There are two problems (i) problems of today; (ii) problems of tomorrow, for the company that hopes to stay in business. The next quarterly dividend is not as important as existence of the company 10, 20, or 30 years from now.” (Deming, p. 24)

What is the traditional purpose of business?

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According to Deming, what is the purpose of business?

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How can management create a constant sense of purpose?

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**Point 2. Adopt a new philosophy.**

Everyone can find ways to promote quality and efficiency, to improve all aspects of the safety management system, and to promote excellence and personal accountability. Pride of workmanship must be emphasized from recruitment to retirement. By their behavior, leaders set the standard for all workers.

*We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for a change. We can no longer tolerate commonly accepted levels of mistakes, defects, material not suited for the job, people on the job that do not know what the job is and are afraid to ask, handling damage, antiquated methods of training on the job, inadequate and ineffective supervision, management not rooted in the company, job hopping in management...*  
(Deming, p. 26)

**What are the programs, policies, procedures emphasized in a traditional (reactive) vs. the total quality (proactive) safety philosophy?**

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<th>Traditional Safety Philosophy</th>
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**DOING THE RIGHT THINGS RIGHT: Meeting customer's needs**

Doing the Right Things Right is the target for continuous safety improvement efforts. In trying to accomplish that, work efforts can generally fall into one (or more) of the following categories:

- **Right Things Right** - Things we should do and we do well (+Leadership, +Management)
- **Right Things Done Wrong** - Things we should do but don’t do well (+Leadership, -Management)
- **Wrong Things Done Right** - Things we shouldn’t do but do well anyway (-Leadership, +Management)
- **Wrong Things Done Wrong** - Things we shouldn’t do and do poorly (-Leadership, -Management)
**Point 3. Cease dependence on mass inspection to achieve quality.**

Reliance on routine 100% inspection to improve quality (i.e., a search for errors, problems, or deficiencies) assumes that human performance error or machine failure is highly likely. Instead, there should be a continuous effort to minimize human error and machine failure.

Lasting quality comes not from inspection, but from improvements in the system. For example, documenting deficiencies in safety record-keeping does not, by itself, generate ideas that would make the task of record-keeping less error-prone. A quality-driven approach might, instead, encourage development of clear and simple record-keeping forms that minimize or eliminate the likelihood of mistakes. Some corporate safety systems depend solely on regular walk-around inspections by the safety director, supervisors and safety committees.

**W. Edwards Deming’s Safe Production System**

**Why is reliance on walkaround safety inspections not an effective strategy?**

**What can a company do to improve safety without relying on walk-around inspections?**

*List and describe your ideas:*
**Point 4. End the practice of awarding business on the basis of price tag.**

Purchasers must account for the quality of the item being purchased, as well as the cost. High quality organizations tend to think of their suppliers as "partners" in their operation. Successful partnerships require clear and specific performance standards and feedback on whether those standards are being met. Supplier performance can also be improved through an understanding of supplier improvement efforts; longer-term contracts that include explicit milestones for improvement in key features; joint planning for improvement; and joint improvement activities.

“We can no longer leave quality, service, and price to the forces of competition for price alone -- not in today’s requirements for uniformity and reliability.” (Deming, p. 31)

Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.

**Where does the safety process begin?**

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**Why does quality suffer sometimes when companies do business with a large number of suppliers?**

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**What policies regarding the purchase of safety products, materials, equipment, and tools might a company adopt to improve safety?**

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**Point 5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.**

Quality can be built into all employer activities and services and can be assured by continuous examination to identify potential improvements. This requires close cooperation between those who provide services and those who consume services. Improved efficiency and service can result from focusing not only on achieving present performance targets, but more importantly, by breaking through existing performance levels to new, higher levels.

“A theme that appears over and over in this book is that quality must be built in at the design stage. It may be too late, once plans are on their way.” (Deming, p. 49)

Improving quality and safety is not a one-time effort with a narrow focus on a limited number of corporate functions.

**What approach to safety must a company take to ensure continuous improvement?**

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Identifying and correcting hazards is merely “putting out fires,” not **solving the problem.** Putting out fires is not improvement of the process. Neither is discovery and removal of a special cause detected at a point out of control. This only puts the process back to where it should have been in the first place.

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**What must a company do to make sure safety problems are solved permanently?**

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**Point 6. Institute training and retraining on the job.**

On-the-job training ensures that every worker has a thorough understanding of: 1) the needs of workers; 2) how to meet those needs; and 3) how to improve the safety management system's ability to meet those needs. Incorporating continuous safety improvement into the fabric of each job can speed learning.

"Training must be totally reconstructed. Management needs training to learn about the company, all the way from incoming material to customer. A central problem is an appreciation for variation." (Deming, p. 52)

**What is the danger in too little safety training or training not conducted by a competent person?**

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**Who should do the training?**

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FIVE PILLARS: Key elements of a Quality organization

A Quality initiative within any organization needs the following five "support" pillars:

1. **Customer Focus** - Aligning all your processes to meet customer needs
2. **Total Involvement** - Getting everyone involved in improving processes
3. **Systematic Support** - Aligning organizational systems with Quality principles and practices (i.e. budget, evaluations)
4. **Measurement** - Establishing performance requirements and monitoring
5. **Continuous Improvement** - Never settling for "good enough"
**Point 7. Adopt and institute leadership.**

The job of management is leadership. Effective leaders are thoroughly knowledgeable about the work being done and understand the environment and complexities with which their workers must contend.

Leaders create the opportunity for workers to suggest improvements and act quickly to make needed changes in production process. Leaders are concerned with success as much as with failure and focus not only on understanding "substandard", but also "super-standard" performance. The effective leader also creates opportunities for below- and above-average performers to interact and identify opportunities for improvement.

“*The job of management is not supervision, but leadership. Management must work on sources of improvement, the intent of quality of product and service...*” (Deming, p. 54)

The aim of supervision should be to help people and machines do a better job, and to increase pride of workmanship. Supervision of management is in need of overhaul, as well as supervision of production workers.

*What are the qualities of good leadership?*

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*How can managers and supervisors display safety leadership?*

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**SAFETY STRATEGIC QUALITY GOAL**

We will deliver the highest quality service to all employees by continuously improving our safety management processes to effectively meet their ever-changing needs.
**Point 8. Drive out fear, so that everyone may work effectively for the company.**

The Japanese have a saying: "Every defect is a treasure", meaning that errors and failures are opportunities for improvement. Errors or problems can help identify more fundamental or systemic root causes and ways to improve the system.

Yet, fear of identifying problems or needed changes can kill improvement programs! Also, some safety managers may think that the idea of making improvements is an admission that the current way of doing things is flawed or that those responsible are poor performers.

“No one can put in his best performance unless he feels secure. A common denominator of fear in any form, anywhere, is loss from impaired performance and padded figures.” (Deming, p. 59)

**Deming wrote that the “The economic loss from fear is appalling.” What did he mean by this statement, and how does it apply to workplace safety?**

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**WHY SHOULD LEADERS PAY ATTENTION TO FEAR?**

Fear is a distracting force that robs employees and organizations of their potential. There is no such thing as "healthy" fear. Fear-based outcomes are usually negative and, in most cases, affect both organizational effectiveness and quality of work life. Fear is a barrier to individual and to organizational performance. Aguayo (1990) summarizes it this way: Fear is a motivator, but it doesn't motivate towards constructive action. It could produce intense short-term bursts of performance, but not better results. The efforts tend to be directed towards avoidance of the perceived danger. Fear nourishes competition, and competition creates anxiety (Kohn, 1986). Competition fosters suboptimization (i.e., when the performance of one person or one process has a negative effect on the aim of the total system), destroys trust, and creates a chain reaction of negative behaviors. Fear erodes joy in work, limits communication, and stifles innovation. Fear fosters short-term thinking as people search to avoid reprisal, perhaps at the expense of others in the system. In fear-based management cultures, people tend to focus on eliminating the threat instead of working to achieve the desired positive outcomes.

(Source: MANAGING FEAR IN THE WORKPLACE, J. Gerald Suarez, Ph.D.TQLO Publication No. 93-01 January 1993)
**Point 9. Break down barriers between staff areas.**

Barriers between organizations or between departments within one organization are obstacles to effective improvement. Inter-departmental or intra-organizational friction or lack of cooperation result in waste, errors, delay, and unnecessary duplication of effort. A continuous and lasting continuous improvement program requires teamwork that crosses traditional organizational lines.

Continuous improvement requires that all workforce members, departments, and units share a unified purpose, direction, and commitment to improve the organization. Intra-organizational pathways are developed and cultivated as mechanisms by which to improve performance.

“People in research, design, purchase of materials, sales, and receipt of incoming materials must learn about the problems encountered with various materials and specifications in production and assembly.” (Deming, p. 62) They must work as a team to foresee problems of production, product or service.

**Cooperation and competition. There’s a place for both. But, why may it be harmful for employers to create a climate of competition among departments?**

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**In regard to safety, why is it important for various departments to communicate and cooperate?**

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**What workplace group is specifically responsible to help break down safety barriers?**

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**Point 10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity.**

The problem with such exhortations is that they put the burden for quality on worker performance instead of poor system design. Continuous improvement requires that the organization focus on improving its work processes. In so doing, service quality will increase, productivity and efficiency will rise, and waste will diminish.

Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.

“You can beat horses; they run faster for a while. Goals are like hay somebody ties in front of the horse’s snout. The horse is smart enough to discover that no matter whether he canter or gallops, trots or walks or stands still, he can’t catch up with the hay. Might as well stand still. Why argue about it? It will not happen except by change of the system. That’s management’s job, not the people’s.” Deming, 1985

**Is it within the power of employees, alone, to achieve zero accidents in the workplace?** Why?

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**Is a “Zero Accidents” policy unrealistic?** Why?

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**Why might the commonly seen “Safety First” poster be ineffective in some safety cultures?**

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**Point 11. Eliminate numerical quotas for workers and people in management. Substitute leadership.**

For Deming, work production standards and rates, tied to incentive pay, are inappropriate because they burn out the workforce in the long run.

Alternatively, a team effort should be marshaled to increase quality, which will lead to increased profits/savings that can then be translated to, for example, higher salaries or better benefits. Improvement efforts should emphasize improving processes; the outcome numbers will change as a consequence.

“A quota is a fortress against improvement of quality and productivity. I have yet to see a quota that includes any trace of a system by which to help anyone do a better job.” (Deming, p. 71)

**What’s wrong with focusing primarily on numerical goals like accident rates to measure the success of a safety program?**

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**If, according to Deming, we shouldn’t measure the safety success of a manager purely on numerical results, what should we measure?** (Hint: Read point 11 carefully)
**Point 12. Remove barriers that rob people of their pride of workmanship.**

The workforce is the most important component of the safety management system. Effective safety cannot exist without workers who are provided with the tools that help them feel proud of their work and respected as individuals and professionals.

Managers can help workers be successful by making sure that job responsibilities and performance standards are clearly understood; building strong relationships between management and the workforce; and providing workers with the best tools, instruments, supplies, and information possible.

The responsibility of supervisors must be changed from sheer numbers to quality. Remove barriers that rob people of their right to pride of workmanship. Abolish the annual merit rating.

**What is “pride of workmanship”?**

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**How may supervisors help increase pride of workmanship?**

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**According to Deming, why might annual performance appraisals that rate or rank employee performance be ineffective?**

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**Point 13. Institute a vigorous program of education and self-improvement for everyone.**

Workers can improve their lives through education and ever-broadening career and life opportunities.

The employer needs not just good people; he or she needs people who are growing through education and life experiences. Management, as well as members of the workforce, must continue to experience new learning and growth.

“What an organization needs is not just good people; it needs people that are improving with education.” (Deming, p. 86)

**What would a vigorous program in safety education and self-improvement look like?**

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**Point 14. Take action to accomplish the transformation.**

The essence of continual improvement is an organization-wide focus on meeting the needs of all employees. Effective quality management programs go beyond emphasizing one or two efforts or areas to improve performance. Every activity, every process and every job in the company can be improved.

Everyone within the organization can be given an opportunity to understand the improvement program and their individual role within that effort. Improvement teams that include broad representation throughout the organization can help ensure success of initial efforts and create opportunities for cross-disciplinary dialogue and information exchange.

*“Management in authority will struggle over every one of the above 13 points...”*  
(Deming, p. 86) Put everybody in the company to work to accomplish the transformation. The transformation is everyone’s job.

**How can you get everyone to participate in the transformation to continuous safety improvement?**
The Deming Cycle And Continuous Safety Improvement

The Deming Cycle provides us with a systematic approach to achieving continuous improvement. It is represented graphically as a circle or wheel because it involves repeating the steps over and over in a continuous effort to improve your processes. The circle has four quadrants: PLAN, DO, STUDY and ACT.

1. Learn what you need to do
   Study the process flow and any existing data. Determine goals and targets. Formulate methods to achieve goals.

2. Make the change
   Use a small-scale test to implement the improvement. Educate and train those responsible for the implementation.

3. Observe the affects
   Measure the results of the improvement by analyzing the data collected. Study to see if the process was improved.

4. What did we learn?
   If the result was a clear improvement, make the change permanent. Standardize and document all actions. If the result was not an improvement, determine what needs to be done to improve: Go back to the plan quadrant and start over.

5. Repeat step 1.
6. Repeat step 2.
   ...

...
Appendix

Continuous Improvement Tools

- Control Charts
- Pareto Chart
- Histogram
- Check Sheet
- Check List
- Cause Effect Diagram
- Run Chart
- Force Field Analysis
- Benchmarking
- Brain Storming
- Mind Mapping

- Key Paradigms of Continuous Safety Improvement
Control Charts

Control charts are a method of Statistical Process Control, SPC. (Control system for production processes). They enable the control of distribution of variation rather than attempting to control each individual variation. Upper and lower control and tolerance limits are calculated for a process and sampled measures are regularly plotted about a central line between the two sets of limits. The plotted line corresponds to the stability/trend of the process. Action can be taken based on trend rather than on individual variation. This prevents over-correction/compensation for random variation, which would lead to many rejects. (The Tools of Quality; Quality Progress, Aug 1990; P D Shainin.)

The probability of a rate or frequency exceeding the upper control limit by chance is very small, and must be attributed to a special cause.

The goal is to increase stability and lower the Upper Control Limit.

Lost Time Injuries per 100,000 Work hours - 2001

Average or “x chart”

Special Cause

Upper Control Limit

Average

Common Causes

Lower Control Limit

Jan 37  Feb 16  Mar 26  Apr 19  May 32  Jun 42  Jul 29  Aug 33  Sep 33  Oct 25  Nov 37  Dec 30

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Pareto Charts

The Pareto principle suggests that most effects come from relatively few causes. In quantitative terms: 80% of the problems come from 20% of the causes (machines, raw materials, operators etc.); 80% of the wealth is owned by 20% of the people etc. Therefore effort aimed at the right 20% can solve 80% of the problems. Double (back to back) Pareto charts can be used to compare 'before and after' situations. General use, to decide where to apply initial effort for maximum effect. In safety, can be used to identify types of accidents, injuries and illnesses, causes of hazardous conditions and unsafe practices, etc.

Frequency of Injuries - 1992-1995 - Portland Plant

Falls From Elevation - Working Surface Type

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Histogram

A Histogram is a graphic summary of variation in a set of data. It enables us to see patterns that are difficult to see in a simple table of numbers. Can be analyzed to draw conclusions about the data set.

A histogram is a graph in which the continuous variable is clustered into categories and the value of each cluster is plotted to give a series of bars as above. The above example reveals the skewed distribution of a set of product measurements that remain nevertheless within specified limits. Without using some form of graphic this kind of problem can be difficult to analyze, recognize or identify. (The Tools of Quality; Quality Progress, Sept 1990; The Juran Institute.)

Check Sheets

A Check Sheet is a data recording form that has been designed to readily interpret results from the form itself. It needs to be designed for the specific data it is to gather. Used for the collection of quantitative or qualitative repetitive data. Adaptable to different data gathering situations. Minimal interpretation of results required. Easy and quick to use. No control for various forms of bias - exclusion, interaction, perception, operational, non-response, estimation. (The Tools of Quality; Quality Progress, Oct. 1990; The Juran Institute.)

Check Lists

A Checklist contains items that are important or relevant to a specific issue or situation. Checklists are used under operational conditions to ensure that all important steps or actions have been taken. Their primary purpose is for guiding operations, not for collecting data. Generally used to check that all aspects of a situation have been taken into account before action or decision making. Simple, effective. (The Tools of Quality; Quality Progress, Oct. 1990; The Juran Institute.)
Cause and Effect Diagram

The cause-and-effect diagram is a method for analyzing process dispersion. The diagram's purpose is to relate causes and effects. Three basic types: Dispersion analysis, Process classification and Cause enumeration. Effect = problem to be resolved, opportunity to be grasped, result to be achieved. Excellent for capturing team brainstorming output and for filling in from the 'wide picture'. Helps organize and relate factors, providing a sequential view. Deals with time direction but not quantity. Can become very complex. Can be difficult to identify or demonstrate interrelationships. (Sarazen, JS., The Tools of Quality; Quality Progress, July 1990.)

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<thead>
<tr>
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<th>Methods</th>
<th>Workers</th>
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<td>No PFAS</td>
<td>Overweight</td>
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<td>No supervision</td>
<td>No Training</td>
<td>Overworked</td>
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<td>No feedback</td>
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Run Chart

Simplest of all the statistical tools. Helps to determine trends. Data through seven periods of analysis need to be gathered to establish valid trends.

Form 801, First Report of Injury, Submissions - 1995
State the Problem: The safety committee lacks credibility.

Supporting Forces
Those forces that support, or at least do not hinder or resist movement toward the desired situation. Those champions who agree with our goals.

Example:
* Support from human resources department.
* Union supports a strong safety committee.
* Safety director is a strong advocate.

Restraining Forces
Those forces working against movement towards the desired situation. Persons who do not support the goals.

Example:
* The accounting department has not budgeted funds for safety committee training.
* Supervisors are reluctant to give safety committee representatives more time to fulfill safety responsibilities.
* Management does not consider safety a critical issue even though the company’s MOD Rate has recently risen to 1.25.

Long Term Strategies
Describe strategies to increase the influence of supporting forces, and decrease or neutralize the influence of negative forces. Examples:

1. Develop a long-term communications plan with the assistance of the safety director.
2. Educate management on the impact an effective safety committee can have on reducing the MOD Rate.

Short Term Actions:
List specific actions that supports the solution strategies. Examples.

1. Obtain figures from OSHA or insurer on costs associated with injuries and illnesses.
2. Display safety committee accomplishments on bulletin board using distinctive interesting format.
Benchmarking

Finding and copying the best practices of other companies.

Five types:

1. **Internal** - Company looks within own departments.

2. **Competitive** - Comparing company key competitive characteristics of a product or service with those of your competitors.

3. **Shadow** - Closely watching changes to key characteristics of a competitor’s product or service so that the company can make similar changes.

4. **Industrial** - Company compares own outcomes and practices with industrial standards and best practices.

5. **World-Class** - Comparing best practices common across industries.

Steps:

1. Assess internal and external customer needs and wants.

2. Identify key needs and wants.

3. Develop operational definitions for critical indicators.

4. Determine the baseline for company’s process.

5. Identify best in class.

6. Gather data about the best in class process.

7. Analyze and develop findings.

8. Develop strategies to adopt best practices.
**Brainstorming**

There are six basic and unalterable rules to the group process of brainstorming that set it apart from other problem-solving procedures. They are:

1. **Define the issue.** Make sure everyone is clear on the problem you are going to brainstorm.

2. **Critical non-judgment.** Defer judgment on any idea that is expressed.
   
   This even includes encouraging comments to others or qualifying phrases attached to your own suggestions.

3. **Organized chaos.** The session should be as freewheeling as possible, with each person voicing whatever ideas come to mind - no holds barred. Ideas may be expressed in rapid, machine-gun, fashion. Don’t limit the creativity.

4. **Similar originality.** Participants are encouraged to hitchhike or piggyback on the ideas of others. When one person’s suggestion sparks an idea by another, it should be instantly expressed. Lots of “ah-ha’s”

5. **Quantity, not quality.** The more ideas the better. The goal of brainstorming is to get as many ideas as possible. Evaluation and elimination can be accomplished later.

6. **Brief summary statements.** Don’t go into great detailed explanations of your idea. You want the recorder to be able to have time to write down all ideas as team members think of them.

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The Japanese have a saying: "Every defect is a treasure", meaning that errors and failures are opportunities for improvement. Errors or problems can help identify more fundamental or systemic root causes and ways to improve the system.

Yet, fear of identifying problems or needed changes can kill safety improvement programs! Also, some may feel that the idea of making improvements is an admission that the current way of doing things is flawed or that those responsible are poor performers.

Improved performance cannot occur unless workers feel comfortable that they can speak truthfully and are confident that their suggestions will be taken seriously. Managers and workforce members must assume that everyone in the company is interested in doing his or her best!
Mind Mapping

Mind mapping is merely drawing circles and lines to help you quickly think about and categorize ideas, problems, concepts, subjects, and just about anything else. Mind mapping is successful because it takes advantage of the brain’s natural ability to categorize ideas in a rapid, but rather unorganized manner. Using this technique, you’ll be able to take any topic, project, or problem and quickly determine related categories, processes, or procedures. Once the mind map is complete, it is merely a matter of reorganizing the information into the more common “outline” format.

Useful for:

- Developing steps in a procedure
- Creating a vision/mission statement
- Listing safety problems
- Uncovering reasons for, or causes of, a specific safety problem
- Listing possible solutions to a safety problem
Essential Reading


Peter R. Scholtes, The Team Handbook, Joiner Assoc., 1988, TEL: (800)-669-8326
Check out the following resources.


**Websites**

American Society for Quality (ASQ)  [http://www.asq.org/](http://www.asq.org/)

National Safety Management Society  [http://www.nsms.us](http://www.nsms.us)


The W. Edwards Deming Institute  [http://www.deming.org](http://www.deming.org)