

## **Ergonomics Processes that Get Results: Benchmarking from the Industry Leaders**

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### **Introduction**

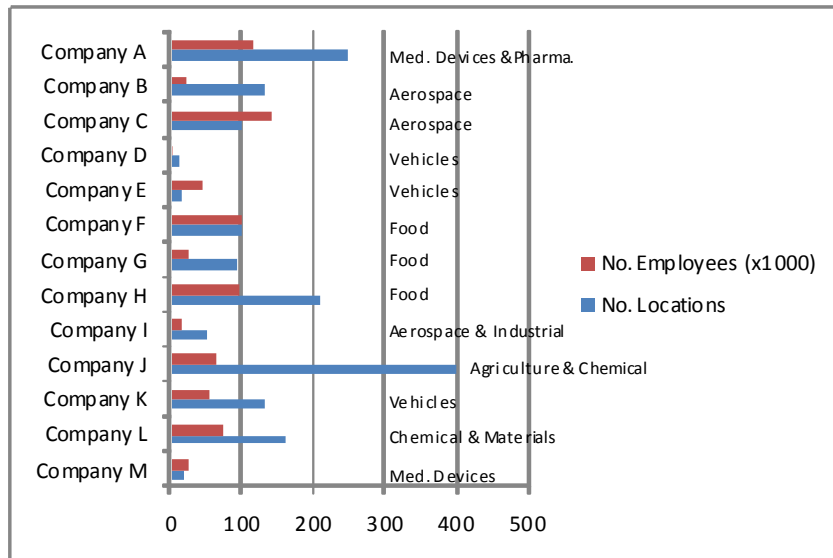
This session reviews the findings of the recent *Elements of Successful Ergonomic Programs* benchmarking project. The study analyzed programs of companies recognized as successfully managing occupational ergonomics. Occupational ergonomics, as defined by the National Institute of Occupational Safety and Health (NIOSH), is “the science of fitting workplace conditions and job demands to the capabilities of the working population. Ergonomics is an approach or solution to deal with a number of problems – among them is work-related musculoskeletal disorders.”

Humantech conducted this benchmarking study as part of an ongoing process to better understand the current status and successful elements of managing occupational ergonomics in today’s workplace. The third in a series of studies, this effort aimed to identify the key elements of world-class ergonomics programs. While many have been leaders in health and safety excellence for some time, this study focused solely on their current program to improve workplace ergonomics. Interviews used a standard question set to consistently explore common program elements.

### **Participant Characteristics**

The benchmarking study focused on Fortune 500 domestic companies regulated by OSHA, with international operations, identified by NAICS (North American Industry Classification System), and recognized as “world class” operations. Humantech approached 18 companies who have presented or published information on their programs, and invited them to participate. Thirteen companies participated in the benchmarking study.

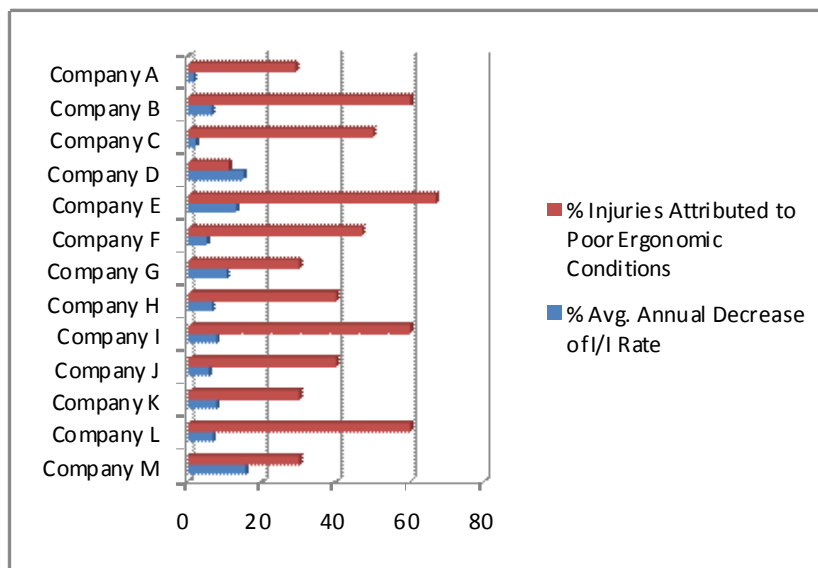
Figure 1 below illustrates the participant companies’ sizes and types of industries.



**Figure 1. Participant Characteristics – Size, Locations, Industry**

Many of the participants are recognized leaders in health and safety excellence; however, this study specifically focused on their current program for improving workplace ergonomics.

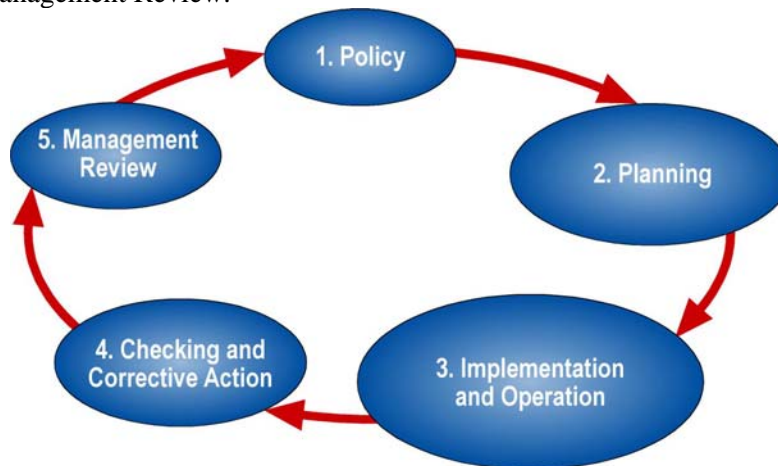
Figure 2 summarizes the percentage of recordable injuries/illnesses attributed to poor ergonomic conditions, and the average annual percentage reduction in recordable injury/illness rate based on the rates and time periods provided by each company. The average is an indication of the normalized rates for comparison.



**Figure 2. Percent of Ergonomic-Related Injuries and Average Annual Reduction**

## Program Elements Evaluated

Each ergonomics program was reviewed using questions aligned with the elements of the widely accepted Safety Management System. Each element within this system has its own set of criteria and the number of criteria is represented in the following figure by the varying sizes of each element. For example, Element 3 – Implementation and Operation has more criteria than Element 5 – Management Review.



**Figure 3. Safety Management System**

## Study Findings

The specific findings in each area are reviewed in the presentation slides. We identified the common and unique practices, trends, and areas of challenge reported by participants. The general findings are listed below.

### **Key Elements for Success**

Following is a compilation of the elements that participants identified as key to the success of their ergonomics program. Many of the elements were repeated by participants as indicated by the number of times it was identified (in parentheses).

- Strong Leadership and Culture: Company support and commitment, and strong management engagement and sponsorship. (9)
- Common Approach and Tools: “Use a common approach or system”. “Grow the system based on the need of the site.” Use a common, standard set of easy, effective risk based tools for assessment, design, cost benefit, and sharing results (9).
- Focus on Reduction of Risk: Systematic risk-based approach (4) Push to do all risk maps first (2)
  - Common Metrics: Establish common risk-based measures to track improvement at the workstation, across a site, and across business units
  - Integrate with Other Initiatives: Integrate with other improvement process/initiative other than safety

- Common Plan for Improvement: Each site should establish a clear plan based on priorities and business conditions (2)
- Defined Roles and Responsibilities: Provide designated resources with clear, defined responsibilities and expectations (4)
- Involvement at All Levels of the Organization: “Engage supervisors and managers and employees. Hold them accountable.” “Ownership by line management” (5)
  - On-Site Resources: Have qualified people available on-site to assist with assessments and solutions. Qualification is provided through skills training (3)
  - Employee Awareness and Involvement: Ongoing awareness training (3). Employee involvement in improvement efforts (3)
  - Engineering Ownership and Involvement: Engineers should use design principles. Engineers should own the process (3)
- Change the Workplace: Ergonomic fit cannot be improved without changes to the workplace and equipment (2) “Without change, improvement does not happen”. Push the program past analysis activity to making workplace changes which reduce risk (2)
- Measure Improvement/Risk Reduction: Capture and measure the gains/results. Track results. Tie the gain to improvement. (3)
- Review/Audit the Process: Conduct a regular review of progress and effectiveness, hold people accountable for results (2).

### **What’s Next?**

Participants identified the following areas for improvement and next step(s) for their ergonomics program.

- Sustainability: Address aspects of the operation and workforce that improve performance. Better predict the impacts of:
  - Aging workforce (3)
  - Remote workers, (2)
  - Psychosocial issues and stress (1)
  - Manage reduced availability of team members (2)
  - Acquisitions (4)
- Involvement with New Process, Equipment, and Product Design: Standardize process design of new equipment and product design tools and training (9)
- Consistency & Stability: Address challenges with program management caused by employee turnover, management of change, and business changes (6)
- Further Involvement and Ownership Within the Organization: Engage the right people to own solutions and changes. Integrate ergonomics at all levels of the organization. Drive program ownership to engineering and supervision (6)
- Repeat Proven Solutions: Improve sharing of effective solutions. Improve repeatability (5)

- Standardized Program: Move to a more common, systematic and comprehensive program. More standardization at the enterprise/ company-wide level (5)
- Update Program Documents: Re-write ergonomics standard/ criteria to strengthen and clarify requirements (3)
- Continue to Roll Out at More Sites: Embed the process at all/more locations (2)
- Internal Trainers: Establish internal trainers for awareness training and skills training (2)
- Program Review: Audit the ergonomics program (2)
- Improve Metrics and Tracking: Strengthen tracking performance. Improve metrics (2)
- Improve Communications: For risk assessments and plans to employees (2)
- Tool Set: Improve assessment and solution tools and process to be more cost effective and faster. Leverage new technologies (e.g., digital devices, on-line training, remote data collection, etc.)
- Workplace Improvements: Focus on more workplace changes, and more effective engineering controls to reduce level of risk.
- Roll-Out to Other Areas in Operation:
  - Office Ergonomics
  - Field service, sales, and distribution operations
- Prepare Leadership: Complete leadership training
- Job Rotation: Investigate the effectiveness and application of job rotation

## Conclusions

The benchmarking study found several common trends among the 13 participating companies along with many unique approaches. Common elements in these approaches include:

- Focusing the goal and measurement of the program on reducing employee exposure to ergonomic risk factors instead of the traditional reduction of injuries.
- Tracking the rate of recordable injury/illness continues to be a common measure of most ergonomic programs.
- Establishing sponsorship and accountability by top management at the site and/or business unit level.
- Establishing common minimum program requirements in the form of a standard or guideline, with the expectation that each site organization develops a local program that best fits their needs, organization, and resources.
- Establishing key program measures and routinely reporting and tracking progress at the site, business, and enterprise levels. Track measures through a graphic digital dashboard integrated within the regular system used to track business measures.

- Using Red, Yellow and Green as indicators of High, Medium, and Low risk or as Exceeding, Close to Meeting, or Meeting performance expectations.
- Designating a person, or persons, to lead the overall ergonomics program.
- Developing in-house resources to conduct assessments, develop and implement workplace changes, and track improvements.
- Using a limited set of common risk assessment tools to simplify the assessment process and establish a common language and measure. Assessment tools include thresholds of acceptability which translate into High, Medium and Low risk.
  - Use a qualitative, screening tool to identify visible indicators of ergonomic issues.
  - Use of quantitative risk assessment tools to measure exposure to ergonomic risk factors.
- Engaging employees and supervisors in the ergonomic job improvement process.
- Leveraging an existing project and planning method to assign and track completion of engineering controls to reduce risk.
- Holding line management (supervisors, managers, operations managers and above) accountable for progress toward the improvement goals, tying progress to compensation.
- Using the existing Performance Review and Appraisal process to hold people accountable for their involvement and results with improving ergonomics.
- Auditing the ergonomics program and performance using an existing audit/review systems (e.g., EHS Audit, etc.).