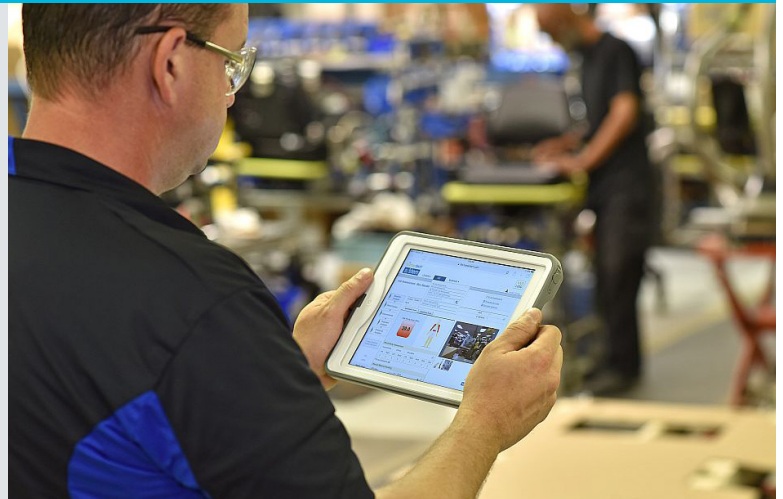


Humantech's Position

# Managing Ergonomics as a Continuous Improvement Process



## Introduction

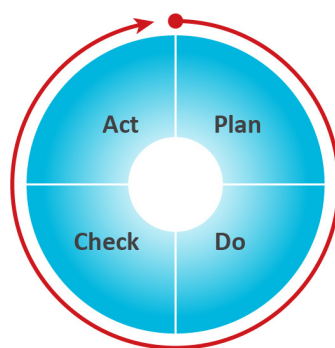
Continuous improvement is an ongoing process to improve products, services, and processes through a series of incremental changes or improvements. This ongoing process has a history of applications to improve quality and performance of businesses. We can apply the same approach to improving ergonomics in the workplace.

Our position on the control of workplace ergonomics is that improvements and sustainability are most effective and efficient when managed as a continuous improvement process.

## Continuous Improvement

The continuous improvement process is founded on the works of Walter Shewhart who, in 1939, introduced his Plan, Do, Check, Act cycle.

This model was applied by W. Edwards Deming in his works to improve quality of industrial operations. In turn, the model has provided the structure for similar continuous improvement processes, including Six Sigma (quality), Lean (waste), Toyota Production System, and Total Quality Management System, among others.



These continuous improvement models are all cyclical, contain the same general elements (but with different names), and have been proven to guide organizations to improve their performance through incremental changes. The continuous improvement (CI) model also provided the foundation for today's environmental management systems (e.g., ISO 14001) and safety management systems (e.g., OHSAS 18001, ANSI Z10, ISO45001).

We have followed this practice of aligning an ergonomics improvement process with a continuous improvement system for over 15 years, as recommended by AIHA, ILO and CSA. In their 2015 review of published literature, Yazdani, et al. concluded the following about the management system model approach for ergonomics: "Incorporating MSDs prevention into tools and techniques used by other stakeholders within an organization will likely increase awareness and improve communication with respect to MSD prevention. Bringing ergonomics as a means of preventing MSDs into organizations' management systems and avoiding silos appears to be highly desirable."

## Program versus Process

Traditionally, occupational safety regulators and professionals in the U.S. sought programs to manage aspects of safety, including ergonomics. This program approach involved ownership by one or a few people (e.g., safety department) with program requirements including several, non-sequential topics (e.g., hazard assessment, training, medical management, and hazard control).

In contrast, managing ergonomics as a process (based on continuous improvement) engages people at all levels of the organization, places accountability and ownership at the correct level, and presents the requirements or actions in a logical sequence. This sequence aligns with Plan, Do, Check, and Act.

**"If you can't describe what you are doing as a process, you don't know what you are doing."**

*W. Edwards Deming*

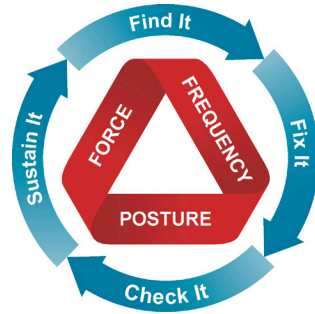
Through benchmarking studies, we have identified that a common thread among companies who were effective in controlling MSD injuries was that they managed ergonomics as a process, not as a program.



## Single Workstation Improvement or Comprehensive Process

The continuous improvement process is scalable. It can be applied to tactical improvements at workplaces and strategically, to manage an ergonomics improvement process.

For individual workstation conditions, we can apply risk assessment tools and design guidelines for ergonomics to find (Plan), fix (Do), and check (Check) the reduction of MSD risk factors to improve the fit of the workplace to a person. And we can repeat the effective improvements at other similar workstations to help sustain the process (Act).



At a strategic level, the CI process provides an effective structure for communicating and guiding the ergonomics improvement process within a single site or across enterprise-wide operations. This application typically includes steps for establishing goals, metrics, risk assessment tools, and responsibilities (Plan); prioritization and planning improvements, training, and including design guidelines in new equipment (Do); conducting follow-up assessments, tracking risk reduction, and completing process reviews (Check); and standardizing designs and revising goal and plans (Act).



## Conclusion

Managing ergonomics improvements by following a continuous improvement model is effective, efficient, and helps sustain the process over time and through business changes. Which specific CI process model is best depends on the organization or site, but it should be one that is already familiar to the organization.

## Endorsement

This position statement was accepted by Senior Leadership on May 25, 2016.

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