

Value Proposition of Ergonomics



Introduction

In business terms, value is commonly defined as the importance or worth to the operation. Effectively communicating the value of ergonomics to all stakeholders starts with providing a clear and concise definition of ergonomics. In simple terms, ergonomics is defined as designing the workplace to match people's capabilities (NIOSH, 1997). The goal of ergonomics is to optimize human performance. When ergonomics is done right, and human performance is optimized, there are two primary positive outcomes: improved employee well-being and improved business performance (Dul et al., 2012). This is the value of ergonomics.

Our position is that the value proposition of ergonomics is two-fold: improved employee well-being and improved business performance.

Perspective of Stakeholders

Traditionally, dependent stakeholders (Safety and Human Resources) appreciate the value of ergonomics. They understand that good ergonomics improves employee well-being. This includes reductions in causal absenteeism, first aid cases, modified duty cases, recordable injuries, lost-time cases, and workers' compensation claim costs, among others (Cantley et al., 2013; Larson & Wick, 2012; Tompa et al., 2013). However, dominant stakeholders (Plant Leadership, Quality, Operations, Manufacturing, Board of Directors, and Investors) generally have a limited awareness or understanding of the value of ergonomics (Neumann and Dul, 2000). Thus, it is often overlooked and underexploited (Dul et al., 2012). They overlook and underappreciate that good ergonomics can improve business performance, such as enhanced product quality, increased manufacturing performance, improved employee engagement, and even better stock performance and corporate social responsibility (Alabdulkarim et al., 2016; Dul et al., 2012; Fabius et al., 2013; Falck et al., 2010; Falck et al., 2014; Goetzel et al., 2016; Goggins et al., 2008; Kahn 1990; Larson & Wick, 2012; Tompa et al., 2013).

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Value to Employee Well-Being

The value of ergonomics as it relates to employee well-being includes:

- **Fewer musculoskeletal disorders and lower associated costs.** Proper ergonomics design and intervention reduce the number of musculoskeletal disorders by 54-64%, the incidence rate by 57-73%, and workers' compensation costs by 62-74% (Goggins et al., 2008; Larson & Wick, 2012).
- **Reduced severity of musculoskeletal disorders.** Proper ergonomics design and intervention reduce lost workdays by 70-80%, restricted days by 42-64%, and costs per claim by 11-67% (Goggins et al., 2008; Larson & Wick, 2012; Tompa et al., 2013).
- **Less employee turnover and absenteeism.** Proper ergonomics design and intervention reduce employee turnover by 40-56% and absenteeism by 43-63% (Goggins et al., 2008; Larson & Wick, 2012; Tompa et al., 2013).
- **Fewer first aid cases and modified duty cases.** Proper ergonomics design and intervention reduce first aid cases by 35% and modified duty cases by half (Larson & Wick, 2012; Tompa et al., 2013).

Value to Business Performance

The value of good ergonomics as it relates to business performance includes:

- **Higher product quality.** Proper ergonomics design and intervention result in reduced rates of product defects, less time spent correcting defects, and lower costs to correct defects by 59-85% (Alabdulkarim et al., 2016; Falck et al., 2010; Falck et al., 2014; Goggins et al., 2008; Tompa et al., 2013).



- **Better manufacturing performance.** Proper ergonomics design and intervention reduce manufacturing task times and improve facility productivity by 20-30% (Alabdulkarim et al., 2016; Goggins et al., 2008; Larson & Wick, 2012; Tompa et al., 2013).
- **Improved employee engagement.** The ergonomics condition of the workplace reflects the dominant stakeholders' respect for employees. To engage employees and establish a foundation of trust and respect, business leaders must connect (Kahn 1990). If the workplace is designed to meet people's needs, it demonstrates the employer's commitment and encourages employees to be fully engaged in the workplace.
- **Better stock performance and corporate social responsibility.** It is proven that companies that invest and build a culture of health by focusing on the well-being and safety of their workforce yield greater value for their investors (Fabius et al., 2013; Goetzl et al., 2016).

Conclusion

As with any improvement process or program, ergonomics must demonstrate tangible benefits to be valued and sustained by an organization. To ensure success, value is greatest when aligned with stakeholder needs and when demonstrated. The two primary values, demonstrated and quantified through research, are improved employee well-being and improved business performance. When ergonomics is done right, and human performance is optimized, both outcomes are realized. Focusing on improving only one outcome, and not both, overlooks and underexploits the value of ergonomics.

Endorsement

This position statement was accepted by Senior Leadership on March 31, 2017.

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