

## Human Factors and Ergonomics initiatives make good business sense

By Eric F. Shaver  
and Curt C. Braun

The business community is acutely aware of the impact the economic downturn is having on profits. In these lean times, companies must decide what to cut and what to keep in an effort to remain competitive, or in some cases, solvent. Given that these difficult times will not last forever, businesses should work to control costs with an eye on brighter days. With what resources remain, businesses should consider endeavors that will increase customer value and/or employee safety, productivity and satisfaction. One approach is to make use of the innovative concepts, methods and tools from the field of human factors and ergonomics.

Human factors and ergonomics is a scientific discipline whose goal is to optimize the interaction between people and the systems they use to enhance safety, performance, and satisfaction. In simpler terms, it focuses on designing the world to better accommodate the needs of people.

In the United States, the discipline of human factors and ergonomics started in earnest during World War II and continues today. What started with addressing the specific needs of the military has expanded into all areas of business, including emerging cutting-edge domains like neuroergonomics and nanoergonomics.

Today, the term ergonomics is often associated with the physical design of products like office workstations or automobiles. Human factors and ergonomic professionals have made considerable contributions to the design of objects. They have also made significant contributions to many other everyday activities, products and methods. Professionals in this field have influenced everything from the high-tech world of software development to life-saving medical devices. Some of the varied domains in which human factors and ergonomics initiatives have successfully demonstrated a positive return on investment include:

- Greater usability of Web sites and computer software through improved interaction between the average user and the technology.
- Designing and/or redesigning tasks and jobs to increase employee safety, productivity and satisfaction.
- Determining the appropriate medical technology to integrate in a health care environment to minimize the potential for error and to maximize patient and staff safety.
- Using evidence-based architectural design to develop solu-

tions that meet users needs from the built environment.

Applying human factors and ergonomic principles and practices benefits customers and businesses.

These principles have been shown to decrease development costs, minimize redesign, reduce time to market, increase sales and market share, decrease customer support and service costs, and improve user experience. Specifically, the potential benefits of human factors and ergonomic initiatives to customers, employees, and companies include:

- Increased safety and health; productivity; reliability and quality; comfort; satisfaction; ease of learning and use; and loyalty.
- Decreased accidents, injuries and illnesses; fatigue and physical stress; absenteeism and turnover; training needs; liability issues; maintenance costs; and time-to-market.

Appropriately implemented human factors and ergonomics initiatives can result in a positive return on investment when performed by individuals who have an understanding of the inherent complexity of people – especially as it pertains to enhancing the design of technology, systems and environments for safe and effective use.

This is especially important in a tight economy where limited resources must result in solutions that are more acceptable, less costly and require less training and support.

\*\*\*

Eric F. Shaver is a senior consultant and Curt C. Braun is the president and founder of Benchmark Research & Safety Inc. Benchmark is a human factors and ergonomics consulting firm that specializes in user-centered design, usability, product and occupational safety, research and training. If you have questions regarding this article, you may contact Shaver at [eshaver@benchmarkrs.com](mailto:eshaver@benchmarkrs.com) or (208) 407-2908.

– © 2009 Idaho Business Review. All rights reserved. Originally published in Idaho Business Review, January 5, 2009.



ERIC SHAVER

CURT BRAUN