

LOGI SENS

Backgrounder

Introducing



The impact of stress in everyday life is far reaching and costly:

- Each week, approximately 95 million Americans take medication for a stress-related symptom.
- Job stress is more strongly associated with health complaints than financial or family problems.
- An estimated one million workers are absent every day due to stress.
- Job stress costs the United States more than \$300 billion annually and has been labeled a “World Wide Epidemic” by the World Health Organization.

Occasional elevated stress can increase productivity. However, when stress levels remain high or follow a trend of increased elevation, psychological and physical problems can result. Until now there has been no easy, scientific way to monitor stress as it happens. Logisens Corporation’s mission is to create the tools to help individuals manage stress and improve productivity in their daily lives.

Product – Optimal Office™

Optimal Office™ from Logisens is the first device designed to measure stress on the job and provide immediate solutions for decreasing its symptoms. The system improves effectiveness and well-being, at the user’s workspace, in real time.

A bio-sensor implanted in a computer mouse measures changes in skin conductance level (SCL - a clinical measurement of the skin’s response to emotional stimuli) and body temperature. The physiological data is registered by the Optimal Office software, which provides ongoing monitoring and reports throughout the work day.

When Optimal Office detects increased stress in the user, the system provides onscreen micro-trainings — proven techniques that include breathing, stretching and calming exercises. The trainings appear several times each day, vary from 30 seconds to four minutes in length and are designed to avoid interruption of the user’s work effort. The total training time in an average day is six to eight minutes.

With just a few minutes of training each day, Optimal Office users become aware of stress at the point of occurrence and learn ways to help bring it under control for an increased sense of well being, effectiveness and performance on the job.

Optimal Office Defines Stress

A scientific definition of stress is difficult because people respond to it with a variety of symptoms. However, one consistent indicator of high stress levels is the skin’s

physiological reaction. Increased perspiration and decreased temperature are two common side effects and both visibly register within seconds.

The palms of hands have approximately 3,000 sweat glands per square inch, about 15 times as many as the rest of our body. Activity in these sweat glands is expressed within 0.5-3 seconds of physiological or mental agitation. As a person begins to relax again, the sweat is halted, begins to slowly dry and is absorbed by the tissue.

Optimal Office Training

Optimal Office turns the user's computer into a wellness coach, offering training and guidance throughout the work day. The system provides moderate physical involvement through progressive micro-exercises — repeated over time, with minimal time commitment, and offering encouragement and acknowledgement of effort.

The Optimal Office system begins with the *Manage Stress* program. *Manage Stress* is a six-month program consisting of approximately 16 hours of self-paced training. The system incorporates the Trans Theoretical Model of Behavior Change. This theory is the foundation for developing effective interventions to promote health behavior change and describes how people modify a problem behavior or acquire a positive behavior. Optimal Office incorporates four elements critical to adult learning: motivation, reinforcement, retention, and transference to ensure user success.

The Optimal Office *Manage Stress* program motivates users by providing an appropriate degree of difficulty, dependent on individual progress. Positive encouragement and repetition of the exercises combine to reinforce the new techniques. Retention is guaranteed by consistent daily practice of the learned skills. Transference occurs when users can apply their new skills on a regular basis.

After users have completed the *Manage Stress* module and the new skills are second nature, they enter the monitoring mode. The monitoring mode keeps the user in control and is triggered only when a threshold of stress is reached, or at the user's request. Additional software modules are currently in development and will be available to the public soon.

Optimal Office Features

Optimal Office can benefit any computer user and promises increased efficiency at work and a greater overall sense of well being. Product features include:

- Assessments for baseline stress levels, psychological states and readiness to change.
- Unobtrusive display options.
- Computer use does not have to be constant. Assumes occasional use of the mouse.
- Self-paced, with preferred program options on call.
- Daily training recommended as most effective internalizing learned skills and executing long-term behavioral change.

- Daily reports; reviews of past measurements to investigate long-term trends — enabling users to correlate responses to events in the workplace. Allows the user to insert comments and notes for evaluation during the review.
- Email and phone support for both technical and non-personal questions about stress and emotional response.
- Contracted professionals available to address more specific questions that require certified expertise.

Incorporating Optimal Office

Optimal Office Small Business is available to both individuals and small companies. It requires installation of the SensDevice mouse and the Web 2.0 software via CD or web. Each user is provided with three short tutorials when the system first runs as well as a “help” feature when needed.

When Optimal Office is used in a large corporate setting, employers benefit by increasing their employees’ awareness of stress and giving them the means to regulate it. The result is both happier, more productive employees AND ultimately, lower health care costs.

Optimal Office allows employers to review and evaluate their group’s collective data to measure results and return on investment. An individual’s data is password protected by each individual user.

Optimal Office Benefits

Financial

Twenty years of studies, involving more than 500,000 people, have proven that implementing stress management programs in the workplace has a positive financial impact. Studies have shown that wellness programs not only increase productivity and employee satisfaction, but reduce absenteeism, sick leave, health care costs, and disability and workers’ compensation costs.

Personal

Surveys of Optimal Office users have reported a decrease in burnout and job-related stress and increased job satisfaction, productivity and overall life satisfaction. Optimal Office provides positive life changes by first creating awareness of stress, teaching skills to manage it on the spot, and finally incorporating that knowledge into everyday life.

Optimal Office Pilot Study Results

Logisens conducted three pilot studies from 2004-2006 to test and evaluate Optimal Office’s usefulness and effects in the workplace. All three test groups were stationed in cubical environments and worked at least five to eight hours on the computer per day, in tasks that required at least occasional use of the mouse. Each group was provided with a one-hour introduction and training and asked to fill out a questionnaire.

In the first two studies, the questionnaire focused on three topics: Burnout, work stress, and life and job satisfaction. The test groups were asked to answer several questions in each category and rate their answers on a scale. Over the six to seven months that they used Optimal Office, the testers were given the same questionnaire a few more times. The successful results at the end of the studies were quite similar.

OVERALL EXPERIENCE	TEST GROUP #1	TEST GROUP #2
Decrease in burnout	22%	22.4%
Decrease in work stress	38%	44%
Increase in life and job satisfaction	6-12%	15%

The first group also performed a separate two month study to measure productivity while using Optimal Office. In that time, the average increase in productivity was 8.83%. For this particular organization, assuming that the average worker costs the company \$37,000 annually, that is a return of more than 1,000% on the investment of Optimal Office in the workplace per employee.

The third study tested a larger group of 92 volunteers and was performed at an aerospace corporation over a five month period. This test group worked in the same conditions as the other two groups and received the same Optimal Office training. They were also given a questionnaire several times over the five months asking for their feelings about burnout, work stress, and life and job satisfaction. Additional questions about productivity were included for the third group as well.

The results from the third test group are as follows:

OVERALL EXPERIENCE	TEST GROUP #3
Decrease in burnout	23.5%
Decrease in work stress	16.7%
Increase in life and job satisfaction	12.5%
Increase in productivity*	3.6%

*Note that only 30% of the questionnaires were returned during one portion of the assessments.

In addition to these findings, all three test groups also found Optimal Office easy to integrate into their daily routine and reported positive feedback after using the system. The users described a newfound awareness of stressors at work, and many employed their new skills outside of the office. One reported, “I realized one day when I was on an airplane, stressed out, that I could do the trainings from Optimal Office...and that they work away from the computer.”

Other users commented on the fact that the exercises allow for personal reflection on their day. One commented that she had become reliant on the SensDevice mouse not only because of the “reduction in physiological stress, but because [it] provides a sense of control in jobs that frequently lack it.”

In addition to decreasing stress and increasing productivity, a cost benefit and ROI calculation demonstrated an annual cost savings ranging from \$2,059 to \$5,169 or an ROI between 3.7 and 9.4 per year.*

About Logisens

History

Logisens Corporation was founded by Chris Stockinger, an Austrian-born, bio-medical engineer who has worked on bio-sensors in the medical and clinical environment for over 15 years. His initial design made bio-sensors “mobile” so that people can use them in their daily lives. The first prototypes were tested with positive results and in 2004 a team of five people started what became Logisens Corporation. The company is privately held and is headquartered in Ft. Collins, Colorado.

In 2006, Logisens was presented with the APEX Award from the Colorado Software and Internet Association for the “Most Innovative Technology of the Year.” The award is presented to a technology company that has implemented a new product or service that is new to the industry, creative, fulfills a need in the marketplace, improves the customer company’s bottom line (by increasing revenue or decreasing expenses), improves customer or employee relations, is efficiently implemented, and will have lasting effects on the technology sector.

The Logisens team has also won two European Awards for its unique biotechnology applications in the clinical and sports markets.

Intellectual Property

Logisens’ core IP is based on more than 15 years of experience and success in the development of biotech and medical devices, and focuses on five areas:

The patented sensors: Logisens’ revolutionary bio-sensor technology captures personal bio-reactions such as stress and excitement in real-time. The design allows for mobility and non-intrusive monitoring during normal daily activities.

The Application Programming Interface (APIs): The real-time personal stress level information can be utilized by software applications in a variety of ways. The programs offer dedicated training and skill building, as well as a new dimension in gaming and specialized market research.

The Training Enablement Engine: Logisens’ software architecture allows for the delivery of biofeedback-guided trainings on personal computers and other portable devices.

**Lowering the Costs of Stress – a Whitepaper*, 2007. Logisens Corporation, www.logisens.com

The methods, intuitive software and biofeedback expertise: Logisens has developed a set of core methods and trainings designed for quick and personalized learning. Logisens also offers assistance from in-house biofeedback experts that will help design and contextually refine the methods and trainings as needed. This ensures the delivery of easy-to-use, intuitive software.

The Web Portal: Logisens will create additional control points by capturing and storing its customer's biofeedback data in a large web-based database. The data is kept personal and secure. This feature allows Logisens to provide customers and end-users with additional value and services.

In addition to the mobile, bio-sensor SensDevice computer mouse, Logisens' technology is capable of adapting to other devices including steering wheels, remote controls, mobile phones, gaming controllers, and many other personal and portable electronics.

Market Penetration

Logisens' initial efforts have focused on managing stress in the workplace, but the application for its technology is literally endless. The company plans on applying its designs to other stress and anxiety inducing arenas such as sports, gaming, education, market research, and health care.

As job and work-related stress is an international epidemic, Logisens is prepared to extend its product line internationally and impact organizations worldwide.