

ALERTNESS METRICS TECHNOLOGY™ (AMT)

The Issue

Scientific data from transportation, health care, public safety, and many other fields have demonstrated that fatigue is a common and important safety concern, especially in 24/7 safety sensitive environments. While society has evolved technologically to create 24/7 global operations, human physiology has not evolved at all. We have maintained our vital need for sleep and the daily programming by our internal body (circadian) clock. Scientific research has clearly shown that sleep loss and circadian disruption can reduce all aspects of human capability. Performance can be significantly degraded and becomes more variable, alertness decreases, and mood is worsened with sleep loss and circadian disruption. These vulnerabilities create the opportunity for more errors, incidents, and accidents to occur and represent a significant safety risk for individuals, companies, and society.

How do you know what is really happening in your environment?

Effectively addressing this important safety issue in 24/7 settings can be a complex and contentious task. One significant challenge is that individuals' report of their performance, alertness, and sleep is usually very different from their actual, objective levels. An individual might report being at a high level of alertness and performance when really the actual levels are significantly degraded. This critical discrepancy was demonstrated in a recent Alertness Solutions study conducted on behalf of Hilton Hotels. Frequent business travelers who reported being highly to extremely productive when on a trip had actual performance levels that were reduced by 20% while traveling. So, how do you assess what the actual performance and alertness levels are for individuals in your workplace environment?

What is AMT™ (Alertness Metrics Technology)?

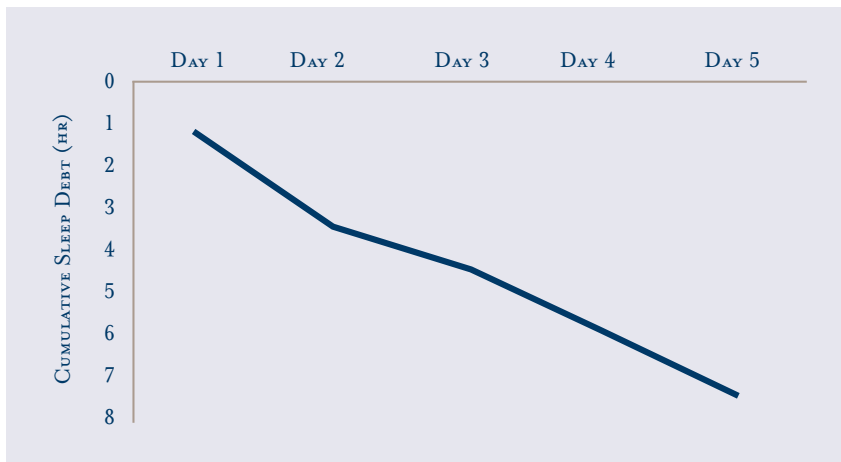


To address this challenge, Alertness Solutions is introducing Alertness Metrics Technology (AMT), an innovative, objective and easy method to quantify performance, alertness, and sleep in operational settings. Based on our experience as NASA scientists, we developed AMT to provide an empirical approach to collect extensive data related to fatigue, alertness, and performance in real world operational settings. Using state-of-the-art technology, including an actigraph and psychomotor vigilance performance testing with a PDA, Alertness Solutions provides a streamlined process to collect objective data in the workplace that is cost effective and reliable. The actigraph is a wristwatch-like device that provides a reliable and valid measure of sleep quantity and quality. The PDA is used to collect a daily log of subjectively reported activities such as sleep timing, physical activity, and caffeine use. It is also programmed with a simple five-minute performance test that is taken on a regular basis to assess overall alertness and performance.

Why is AMT an important solution for your company?

Rather than relying on anecdotal evidence or subjective self-reports, AMT provides companies with empirical data to guide challenging operational decisions involving fatigue and safety considerations. As questions arise about schedules, the use of possible alertness strategies, how current practices affect fatigue and performance, and many other 24/7 operational issues, AMT data can help to evaluate an operation's fatigue risk and address implementing change for improved safety.

Alertness Solutions will work with your company to create a tailored AMT data collection program that best addresses the specific operational issues relevant to your setting. As a neutral, science-based, external party, Alertness Solutions provides assurance that participants will remain anonymous and that results from AMT activities are kept confidential within a group reporting format. Companies receive a final group report that will help determine how policies, procedures and operational activities affect safety, performance, and productivity. AMT provides companies with objective performance, alertness, and sleep data that can be used to guide operational decisions and lead to improved safety and performance.



AMT data from business travelers in Hilton Hotels study revealed that actual sleep time was one hour less than reported.

This lost sleep built up over the course of several days into a "sleep debt" of almost 8 hours as shown in this graph.

To learn more about how AMT can provide a solution for your company, contact Alertness Solutions for further information or to arrange data collection in your environment.

About Alertness Solutions

Alertness Solutions is a recognized industry leader that specializes in translating knowledge on sleep, circadian factors, alertness, and performance into practical strategies that improve safety and productivity in our 24-hour society. Alertness Solutions is headed by Dr. Mark Rosekind, a former NASA and award-winning scientist recognized for creating effective, real-world solutions based on his extensive scientific and applied expertise. For more information about AMT and Alertness Solutions, please visit our web site at: www.alertness-solutions.com.

ALERTNESS SOLUTIONS

20111 Stevens Creek Boulevard, Suite 280, Cupertino, CA 95014, Tel 408.253.1019, Fax 408.253.2317

Email bealert@alertsol.com, <http://www.alertness-solutions.com>