

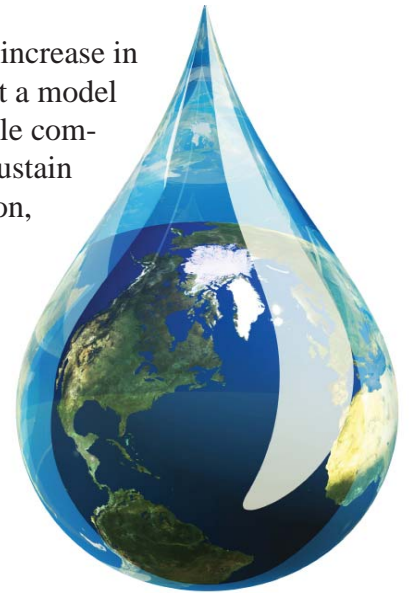
SUSTAINABLE COMPUTING



**A Model of Efficiency & Reliability
for a Competitive Advantage**

When you combine today's hyper-competitive environment with the exponential increase in data sources, data analytics and demand on computing resources, it is evident that a model for sustainable computing is required to gain and maintain superiority. Sustainable computing is not only about energy efficiency but equally important is the ability to sustain end-user operations while maintaining high productivity levels. Since its inception, the desktop PC has become a mission critical productivity tool. The challenge is that the traditional distributed desktop computing model has created a ceiling on productivity and performance. The most effective paradigm for eliminating the productivity barrier and delivering an exponentially more efficient computing infrastructure is to move the workstation from the desktop and place it in the data center. By moving the workstation from the desktop to the data center you eliminate the problems that distributed box PCs create while delivering:

- **Improved Energy Efficiency** - ClearCube blade workstations average 55% greater energy efficiency than comparable desktop workstations. When virtualized this benefit can increase more than 5 times.
- **Improved Thermal Characteristics**- Over 90% of the heat generated by PCs in the work environment is eliminated by replacing the desktop PC with a ClearCube Zero Client connected back to a ClearCube blade workstation in the data center.
- **Noise Reduction** - By replacing the desktop PC with a ClearCube Zero Client, 100% of the decibels are eliminated from the work environment. According to a 2000 report in the Journal of Applied Psychology by a Cornell University Research Team², stress levels were significantly higher in an office with low intensity background noise than in a quiet office. The study group also showed less motivation in approaching problem solving tasks, seriously affecting productivity.
- **Higher Uptime** - ClearCube blade workstations deliver 99.99% uptime resulting in a 38% reduction in help desk incidents and a 69% reduction in end-user downtime.
- **Greater physical and data security** - ClearCube blade workstations incorporate the latest Intel security advancements into the computing architecture and mitigate the risks from the most common threat vectors resulting in a significantly more secure environment.



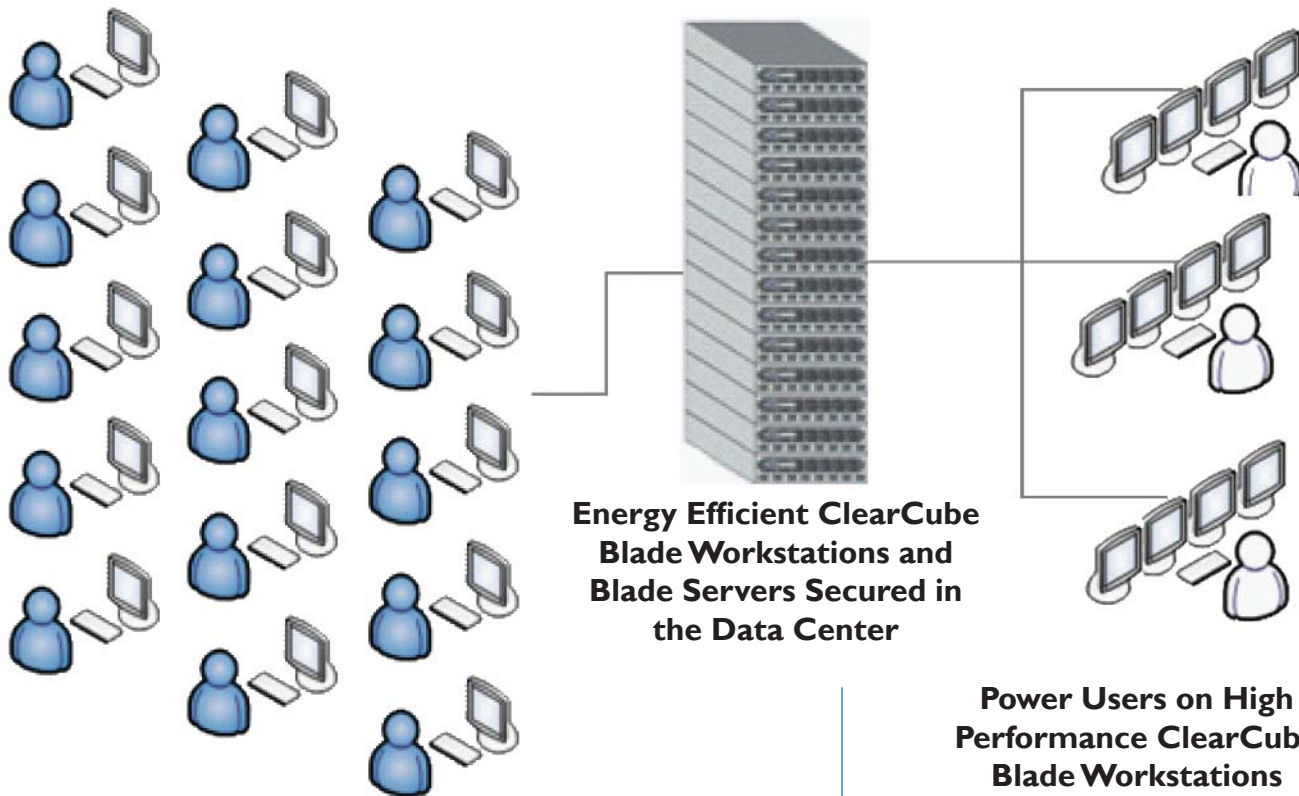
Eliminating HEAT, NOISE and MAINTENANCE from the Work Environment Contribute to Sustained Operations

According to a 2010 IDC study¹ on the impact of blade PCs on operations, moving PCs to the data center help deliver sustainable computing by:

- Removing desktops from the workplace reduces facilities costs for space, HVAC, security and electrical by 25%.
- Most companies in the study experienced 1-2 PCs per year being stolen from the workplace. Losses due to theft were reduced to zero once blades were deployed.
- Help desk calls dropped by 38% while downtime at the companies studied was reduced by 69%.
- Downtime reductions returned 8 hours per year of productive time to each user.

¹ "The Tangible Benefits of Blade Computing," IDC, March 2010
² "Stress and Open-Office Noise", Gary W. Evans and Dana Johnson, Cornell University, Journal of Applied Psychology, 2000, Vol. 85, No. 5, 779-783, ©2000 American Psychological Association.

The Sustainable Computing Model



**Energy Efficient ClearCube
Blade Workstations and
Blade Servers Secured in
the Data Center**

Power Users on High Performance ClearCube Blade Workstations with Zero Clients

Task and Knowledge Users on Virtual Machines Powered by ClearCube Blade Servers with Zero or Thin Clients

ClearCube's virtual desktop solutions deliver a quality PC experience to task and knowledge workers. The application profile of these workers qualify them for a shared computing resource while delivering the same computing experience as a desktop PC. ClearCube virtual desktop solutions are a force multiplier for delivering sustainable computing by slashing the energy, maintenance and capital expense of the computing infrastructure while dramatically improving the work environment.

ClearCube works with the leading virtual desktop software from VMware, Citrix and Microsoft. ClearCube Zero Clients and Thin Clients have been certified on virtual desktop software platforms to ensure seamless operations.



ClearCube invented the first blade workstation and continues to innovate by delivering powerful workstation performance to the user from a centralized location or data center. The blades are compact, over 55% more energy efficient than comparable box PCs and house the latest technology including Intel® processors using Nehalem Dual-core, Quad-core and Hex-core architecture.

ClearCube Blade Workstations power some of the world's most demanding applications, including CAD, Financial Analytics, Video Editing and Rendering as well as custom applications developed for use in government military installations, command and control centers, laboratories and E911 facilities.