



A WHITE PAPER BY
TANDBERG
MAY 2007

TANDBERG VISUAL COMMUNICATION IS GREEN

ENVIRONMENTAL BENEFITS OF VIDEO TELEWORK
FOR INDIVIDUALS, COMPANIES, AND COMMUNITIES

TANDBERG

See: performance



By its very nature, videoconferencing is a “green” technology with a wide range of benefits.

Organizations around the world are becoming more environmentally conscious. This has come about for a number of reasons, including government regulation and incentives, initiatives to improve quality of life for employees, and customer demand. Whatever the motivation, the reduction of pollutants introduced into the ecosystem would be welcomed by all. This is especially true when reducing pollutants also reduces costs.

By its very nature, videoconferencing is a “green” technology with a wide range of benefits for corporations, individual employees, and the community at large. Video can be an essential tool for developing an integrated environmental program that raises employee satisfaction, reduces costs, and increases productivity and shareholder value. One innovative way for environmentally conscious companies to realize measurable return on their video investment is to develop an effective “telework,” or “telecommuting” program.

HOW TO GET AN 8-DAY WEEK? SAVE ONE HOUR EACH WORKDAY BY NOT COMMUTING TO THE OFFICE

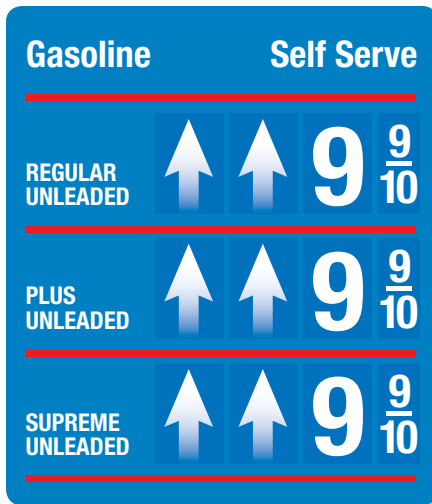
As telecommuting programs are on the rise, video has become an essential tool for home-based employees who want to maintain a visual connection with their workplace. What’s more, their companies appreciate the reduction in cost and increase in worker productivity gained through telecommuting. For the tens of thousands of companies worldwide that already have videoconferencing solutions installed, extending the benefit to telecommuters is the natural next step in technology adoption. For companies that have been seeking a way to jumpstart telecommuting programs, implementing a video network is an effective way to realize tangible benefits right away.

THE SOCIALLY RESPONSIBLE ORGANIZATION

In many countries, companies are expected to articulate a corporate statement on industrial environmental protection and to take specific action to put this credo into practice. Image campaigns, product advertising, and annual reports all emphasize environmental protection as a distinguishing feature of market-oriented companies.

Business partners (customers, suppliers, employees, stockholders, etc.) and a critical general public all take an increasingly hard look at companies’ processes and the consistency of their commitment to the environment. Environmentally “responsible” policies can even improve a company’s rating with certain investors.

There are a number of steps a company can take to improve its standing as an environmentally conscious organization, focusing on manufacturing processes, recycling and disposal, product design, and employee-oriented programs such as telecommuting.



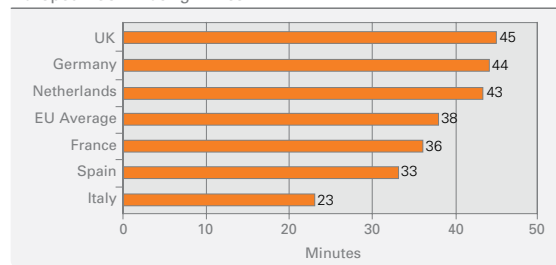
THE COST OF COMMUTING

The impact a corporation has on the environment extends beyond the direct actions that the company might take. Employees that commute to work are doing this on their "own time" but obviously this activity is being driven by employment at the company. Fuel costs are rising and commuting distances are getting longer as employees move farther from their workplace. In addition, geographically dispersed work teams, increasingly complex supply chains, and globalization have all lead to increased business travel. As a result, direct costs and harmful CO₂ emissions from transportation are rising.

In the United States, the average commuter spends more time commuting each year than on vacation. Using an average commuting distance of 18 miles each way and an average highway mileage of 23.4 mpg, the daily fuel consumption due to commuting is at least 1.5 gallons for a round trip. A five-day commuting workweek releases at minimum 5,154 lbs of CO₂ into the atmosphere each year, per employee.

In Europe the commuting times are even greater, with the United Kingdom having the worst commute in the European Union. British commuters have the longest journeys to work, with the average trip taking 45 minutes. That is almost twice as long as the commute faced by Italians and seven minutes more than the European Union average.* With fuel costs moving above \$4.00 per liter, the cost of commuting is becoming a strain on the EU worker.

European Commuting Times



It is also a strain on the environment. At an average commuting distance of 13.7 miles each way, and an average highway mileage of 28.4 mpg, the commuting fuel consumption in Europe is more than one gallon each day per employee. The environmental impact for each commuter is the release of approximately 3,800 lbs. of CO₂ into the atmosphere.

In the United States, the average commuter spends more time commuting each year than on vacation.

THE BENEFITS OF TELEWORK

As a result of rising commute times, fuel costs, and environmental impact, many companies worldwide are initiating telecommuting programs. In the year 2000, 30 percent of all organizations in Europe practiced telecommuting on a regular basis, according to a report on Electronic Commerce and Telework Trends. All indications are that this number is rising. In the United Kingdom, for example, teleworker numbers rose from 921,000 (4% of workers) in 1997 to 1.8 million in 2005 (8% of all workers).**



In order to attract and retain high-caliber management staff and knowledge-workers, it is now becoming essential for a company to offer some form of telecommuting benefits.

According to the International Telework Association, the number of employed Americans who worked from home at least one day each week grew from 41.3 million in 2003 to 44.4 million in 2004, a 7.5% growth rate.**

Technology advances such as high-speed internet, VoIP, and collaboration tools such as e-mail, Instant Messenger, and Web and video conferencing, make it possible for an employee to stay connected without physically being in an office.

Telecommuting programs lead not only to indirect benefits such as increased quality-of-life for employees and a reputation for environmental stewardship. There can also be some very real savings for a company that implements a telecommuting program:

- A corporation can calculate the tons of CO₂ that would have been produced by the fuel burn caused by employee commuting and present this as a metric to measure environmental improvement to support ISO14001 certification.
- Governments are developing initiatives that encourage telecommuting. Tax credits or other incentives may be available for hardware purchases that enable employees to work from home.
- Employees find that telecommuting at least one day per week raises their job satisfaction. In order to attract and retain high-caliber management staff and knowledge-workers, it is now becoming essential for a company to offer some form of telecommuting benefits. Costs for recruiting and training are reduced by retaining satisfied employees.
- Particularly for companies with consultants, lawyers, accountants, and other engagement-based staff, having them travel for a half day to spend an hour or two with a client is an unproductive use of time. Having them participate in meetings without traveling allows them to serve other clients and be more cost-effective.
- Teleworkers actually can be more “plugged in” to projects than non-teleworkers. They are more likely to check in after-hours and contribute more time to a project.
- Allowing sick employees to work from home reduces the chances that they will affect the rest of their office and cause a further dip in productivity.
- A company with employees joining meetings from home on a regular basis can save on the cost of office space.
- In addition to daily commuting costs, fuel and travel costs for business trips can be reduced with effective use of videoconferencing. Not only can travel be reduced for intra-company meetings, a business-quality video solution can help an employee connect to external customers and suppliers over video as well.
- Setting up employees with technology at home helps an organization stay connected in the event of a natural disaster or other crisis situation.



“Out of site” but not “out of sight.” Managers can maintain trust with their employees because their communications are face-to-face.

HOW CAN BUSINESS-QUALITY VIDEO HELP?

In order to feel comfortable implementing a telecommuting program, managers with home-based employees need to know:

- What if I can't reach someone when I need to?
- How will I maintain the personal connection with my co-workers?
- How do I know my employees are really working?
- How much will it cost to equip my home workers?
- How reliable and secure are the technology tools that we need to telecommute?

Videoconferencing addresses these concerns because it maintains the visual connection. It allows teleworkers to be a part of collaborative teams and stay connected no matter where they are, avoiding the dip in morale and the loneliness factor that can come from working alone.

Managers can maintain trust with their employees because their communications are face-to-face. Employees may be “out of site” but they are not “out of sight.” Miscommunications are avoided, decisions are made more quickly, and productivity is raised.



Today's videoconferencing solutions offer affordable “personal” systems for individual workers, as well as integration with PCs and 3G mobile phones. By implementing a business-quality video solution, these devices can be part of a centralized infrastructure and management system and take full advantage of the features and functionality of the highest quality video technology available.

With a business-quality video solution, documents and multimedia presentations can be shared seamlessly, simply by connecting a PC. Parts and designs can be viewed simultaneously with the presenter of the information and all meeting participants. This dramatically reduces the cost of collaboration at a distance and increases the visual impact of the exchange of ideas.

Meetings can be archived and streamed for later viewing, allowing others to join in video meetings, trainings, and product demonstrations at times that are convenient for them. Encryption and authentication make sure that conversations are kept private. And, firewall traversal technology allows companies to keep remote workers' video systems inside the corporate firewall, while allowing them to connect securely to the home office, or external customers or suppliers.



The TANDBERG Solution is helping customers of all types to raise the quality of life for their employees and increase productivity.

In order to realize the benefits that videoconferencing can offer telecommuters, it is essential that a company has confidence in its video solution. It must be reliable, offer high-quality audio and video with minimal packet loss, and provide access to technical support and service. Management systems are helpful in tracking video usage, helping companies record their telecommuting savings and measure Return on Investment (ROI) on their video investment.

As a company realizes the benefits of using video for telecommuting, its adoption will grow. It is important to choose a video solution that is scalable, standards-based, and can integrate with other collaboration tools that might be used by a telecommuter. Only a business-quality solution offers the functionality that can make a telecommuting program a success.

TANDBERG'S BUSINESS-QUALITY VIDEO SOLUTION

The Total Solution from TANDBERG, a global leader in visual communication, offers the broadest range of products in the videoconferencing industry, including:

- A full range of video endpoints for boardrooms, executive offices, and home offices
- Network equipment for enterprise transport
- Software-based management system for remote monitoring, diagnosis, and ROI reporting
- Firewall traversal technology to tie in external organizations, such as suppliers and customers
- A content server to record, archive and stream video meetings
- The highest level of encryption and authentication
- Seamless integration with Microsoft, IBM, Cisco and Nortel, helping remote workers connect to VoIP networks, as well as instant messaging and scheduling programs

The TANDBERG Solution is helping customers of all types to raise the quality of life for their employees and increase productivity. We are committed to helping companies that wish to implement telecommuting programs make the most of their opportunity to protect the environment and realize a return on their investment.

For more information about the best ways to outfit home workers with the appropriate systems and infrastructure for telecommuting over video, please contact TANDBERG at www.tandberg.com.



For more information on telecommuting trends and implementing telecommuting programs, the following organizations may be helpful:

INTERNATIONAL TELEWORK ASSOCIATION & COUNCIL

www.workingfromanywhere.org/

EU TARGET

www.eu-target.net/

**OFFICE OF PERSONNEL MANAGEMENT & GENERAL
SERVICES ADMINISTRATION – TELEWORK INITIATIVE**

www.telework.gov

THE TELEWORK COALITION

www.telcoa.org

AMERICAN TELECOMMUTERS ASSOCIATION

www.knowledgetree.com/ata.html

THE INDEPENDENT HOMEWORKERS ASSOCIATION

www.homeworkers.org

ECOMMUTE

www.nepi.org/ecommute.htm

GLOBAL ENVIRONMENT & TECHNOLOGY FOUNDATION

www.getf.org

TELETRIPS

www.secure-teletrips.com

GREENBIZ

www.greenbiz.com

BEST WORKPLACES FOR COMMUTERS

www.commuterchoice.gov

* IST Programme, ECaTT Final Report, Benchmarking Progress on New Ways of Working and New Forms of Business Across Europe, 2000

** Office for National Statistics, Labour Market Trends, 2005

*** The Dieringer Research Group, American Interactive Consumer Survey, 2004