

GREENER COMPUTING

In an effort to reduce our carbon footprint and create a greener world for future generations, more and more businesses are encouraging the viability, reliability, and sustainability of the green Software-as-a Service (SaaS) model.

Below is a reproduction from two progressive thought leaders in this space, Clickability, a San Francisco based Web Content Management company and WebEx, the Web Conferencing and Collaboration Solution specialists.

Clickability believe that traditional, on-premise software is fundamentally anti-green, based on its slow pace of software innovation and reliance on multiple, redundant, outdated, and energy inefficient hardware.

Furthermore, Clickability firmly believe that their *Four Green Tenets* of the SaaS delivery model significantly reduce the overall amount of carbon dioxide emissions, while at the same time enabling our customers to operate with greater agility, profitability, efficiency and innovation.

First Tenet: Providing Centralized Processing and Shared Services

The multi-tenant SaaS model centralizes data centre operations and uses less equipment and energy. Instead of thousands of individual customers operating thousands of their own servers, the multi-tenant, SaaS data centre combines the operations of many companies, drives efficiencies, and directly reduces the amount of carbon dioxide emissions.

Second Tenet: Building Green SaaS Data Centres

SaaS data centres are built to maximize energy efficiency and minimize waste. Power consumption is reduced through equipment density and cooling efficiency. What's more, since SaaS data centres have stringent customer service level agreements, they are populated with the newest and most energy efficient equipment on the market, even further limiting environmental impact.

Third Tenet: "Greening" Code through Agile Software Development

Because of the distance between client and application in the SaaS software environment, customer service level agreements demand extremely fast application delivery. Consequently, SaaS engineers are required to write code that is lean and elegantly simple, limiting the number of energy-wasting processor calls. In contrast, within the traditional, on-premise software environment, delivery speed is not a requirement and often viewed as inconsequential. As a result, on-premise code is heavy and complex, requiring multiple, inefficient, and power-consuming processor calls.

By definition, the SaaS software development model requires continual innovation that meets the real-time needs of customers. In contrast, traditional, on-premise software is built according to plan-driven development releases, which are usually large, long, and late. The agile engineering approach used to develop SaaS software dramatically compresses development time and expedites the creation of energy-saving innovation.

Fourth Tenet: Running Our Entire Business on the SaaS Model

As a SaaS company, Clickability is committed to using only SaaS applications when conducting company business. By relying on SaaS applications for Finance, Human Resources, Marketing,

Customer Relationship Management, and Sales, we strive to serve as a model for energy efficiency and corporate responsibility.

As articulated by these *Four Green Tenets*, Clickability fundamentally believes that moving away from on-premise software to innovative SaaS solutions is not only good for the environment, it is simply good business. A well-planned SaaS deployment reaps immediate financial returns and cost savings. But more importantly, it is a major step forward for those companies committed to creating a greener world for generations to come.

Source: http://www.clickability.com/SaaS_is_Green.html

Gary Griffiths the president of Products and Technical Operations at WebEx commented:

"Whether or not you believe mankind is responsible for global climate change, there is certainly enough hot air being generated talking about companies both big and small "going green" by offsetting carbon outputs, switching to energy efficiently light bulbs and encouraging recycling, to raise somebody's temperature somewhere.. But whichever side of the debate you stand on, many companies still struggle with both the expense and environmental impact of business related travel and maintaining information technology infrastructure.

The good news is that with the help of web-based applications, organizations can easily and affordably reduce their environmental footprint. Collaborative software delivered through the software-as-a-service (SaaS) model enables organizations to conserve energy and operate more efficiently by increasing organizational efficiencies, reducing the need for in-person meetings and decreasing the amount of technology infrastructure needed to maintain productivity.

For example, by eliminating the need to make four round trip flights between New York City and Chicago for two co-workers, a business can save 3.19 metric tons of carbon dioxide a year. Not taking these four trips also reclaims 26 hours of travel time and approximately \$1400 in airfare. Furthermore, giving employees the option of telecommuting, even one day a week, can reduce carbon dioxide production by a considerable amount. One driver making a forty mile round-trip commute once a week at 24 MPG can prevent the production of three-quarters of a ton of carbon dioxide by working from home.

From web and video conferencing applications, instant messaging and remote access services to web-based office solutions there are a number of tools available to help organizations reduce the need for travel and the amount of energy consumed by IT. As an added benefit, software delivered via the web enables collaboration across organizations, allowing workers to interact with customers, peers and business partners, without having to travel.

Web, Audio and Video Conferencing

The combination of web, audio and video conferencing provides tools that, while not as intimate as a face-to-face meeting, give participants the ability to interact more closely than they would over the phone alone. Web conferencing provides the added ability to share information through presentation tools as well as collaborate in real-time on documents, such as product design requirements or contracts.

Web conferencing technology is a well established tool used by organizations of all sizes to reduce travel expenses. For example, a large technology company that designs systems and software uses

web conferencing to bring together teams spread across the globe as well as present to, and support its customers. Today, over half the company no longer has permanent office space, reducing the amount of commercial real estate that the company has to maintain.

Reducing a commercial real estate footprint is just another way for organizations to reduce energy consumption. In fact, according to some studies, commercial real estate contributes to about 20 percent of our annual greenhouse gas emissions and all real estate contributes as much as 50 percent of our greenhouse gas emissions and 71 percent of electricity consumption.

Instant Messaging

Instant messaging (IM) has come a long way over the year. Today, people around the globe use it to communicate in real-time to interact with coworkers, partners, and customers. A number of companies provide free, easy to use IM solutions including AOL, Yahoo and Microsoft.

However, some offer a more broad set of features than others, including VoIP (voice over IP), and video or application sharing, to help workers quickly engage in collaborative one-on-one sessions. Through a partnership with AOL, WebEx now offers a business-specific IM solution that also includes security controls for IT administrators and a more complete set of business focused features.

Regardless of solution, IM provides a quick and easy way of virtually walking to a coworker's cube or office to get a quick answer to a question.

Virtual Workspaces

Virtual workspaces provide organizations with ways to share information internally and externally without adding complexity to their IT infrastructure. This allows companies to provide resources and information to remote workers quickly. A company such as an executive recruitment firm could use the technology to broaden its reach without building out new offices to serve clients in certain geographies. If the firm is based in a Mid-Atlantic state, but services companies along the Eastern Seaboard, it could hire individual recruiters to work from home near clients to help service those accounts, without renting, configuring and supporting dedicated office space. The recruiters have access to shared information in the virtual workspace, including calendars, documents, customer records, and databases, whether they are at home, at a client location, or interviewing a candidate at a local restaurant or coffee shop.

Remote Access Services

Remote access services, which allow workers to access a remote computer from another computer or mobile phone, are tools that reduce the need to travel back and forth to the office. This kind of SaaS application allows workers that may have a desktop PC at the office to stay connected and have convenient access to information when they have the need.

For example, an inside sales representative at a company may have planned to make some follow up calls during the commute home or after he or she gets home. If the sales rep forgets to transfer some contact information to his or her mobile phone before leaving the office, it means turning around or making a special trip back to the office. Remote access services allows that worker to securely access the work PC either from a home PC or Smartphone to look up the number without having to turn back.

Measurable Benefits of Web-based Applications

Web-based collaboration solutions are an effective, practical addition to help companies reduce travel to aid environmental efforts. And once companies get started they can measure their carbon savings with help of our online carbon calculator at: WebEx.com/CarbonCalculator.

Beyond the reduction in travel, web-based applications also improve energy efficiency for IT infrastructure. The structure of SaaS computing, by its nature, shares demand across many different organizations with different work schedules, so that there are fewer periods of peak demand. This results in more efficient sharing of hardware and power resources. SaaS applications that have global reach will spread demand across time zones, so servers are never powered on and idle.

When comparing on-demand applications with on-premise applications, running on-premise applications require the buyer to invest in, and power, a server to run the application at his or her location. For the buyer, these servers often operate inefficiently, consuming power at a high rate 24 hours a day despite the fact that user demand is typically tied to an 8 to 12 hour workday.

For companies that want to embrace on-demand, collaborative technology for positive environmental implications, the benefits can scale with the use of the technology as well as the organizations commitment to the ecological benefits. That is, if an organization wants to start small and allow telecommuting once a week for certain workers, they can do so and see ecological benefits. They can try tools to reduce long distance travel slowly to gauge the economic, productivity and ecological benefits. As the commitment to SaaS, collaboration technology and telecommuting grows, so do the ecological benefits.

Source:

<http://www.greenercomputing.com/blog/2007/11/30/harnessing-internet-boost-conservation-efforts>