

## High Performance Websites = Energy Saving + Social Inclusion

**GREEN WEBSITES** - Did you know that viewing a simple web page generates about 20 milligrams of CO<sub>2</sub> per second? This rises to about 300mg of CO<sub>2</sub> a second when viewing a website with complex images, animations or videos.

According to Gartner, the carbon footprint of information and communications technology exceeded that of the global aviation industry for the first time in 2007.

Every page you visit causes energy use across the world: The servers, things in-between, and finally your computer.

And From 2003 to 2009 the average web page grew from 93.7K to over 507K. While performance has improved, it seems we have forsaken basic compression logic for increased quality, hence larger files behind our web pages.

**ACCESSIBLE INCLUSION DRIVEN, SUSTAINABLE NET** - In a way this very digital 'progress' has increased the digital divide. The narrow band users cannot access these 'standard' web pages. What comes to mind is pre-oil-shock-America. Roads were good. Gas was cheap. The industry produced bigger and bigger guzzlers. Till things changed one day!

**OPERATING COSTS** - If you are running a website, you are paying moneys for hardware, bandwidth, the running of both & people who put them together. All four of these operating costs can be reduced, if your website is fast and efficiently designed.

### TOOLS TO LOOK AT

Google Page Speed  
Yahoo ySlow  
WebPagetest  
Gtmatrix  
Zoompf

**IMPACT OF SPEED ON CUSTOMER RETENTION** - Bing says, a two second slowdown, caused a drop of 1.8% in queries/user and 4.3% in revenue/user. Google found a 400 millisecond delay resulted in .59% drop in search/user. This drop persisted even when the reasons for delay were removed, indicating that user experience affects even long term customer retention at the website.

**IMPACT OF SPEED ON RETAIL REVENUE** - For your retail website, two metrics are most important Page views and exit rates. In this context the experience of two website is of note. Shopzila reduced their page load time to 2 sec from 7 sec. This resulted in 25% increase in page view, 7-12% increase in revenue and about 50% decrease in hardware. Wikia found that a exit rate drops from 15% for a 2 second page to 10% for a 1 second page. These studies shows that you should concentrate on giving a holistic speed experience to guide user to the intended pages. If you are able to consistently deliver this to your consumers you will surely achieve more with your website.

**IMPROVE YOUR SEO RANKINGS** - Google explicitly says that it uses page speed as one of the 200 criteria for page ranking. Knowing this it becomes an important factor to optimize when implementing SEO. Sadly, webmasters tend to forget this and persist with inefficient designs.

**ENVIRONMENTAL POLLUTION AND SOCIAL EXCLUSION** - A Better, Faster, Stronger Web is the desire of all, be it companies –to reduce costs, have higher returns, or users – to reduce time and have better net experience. Increasing page load speed is one of the most fundamental and probably the simplest things that help achieve this objective. Faster websites will achieve the twin objectives of environmental (saves energy) and social (includes people with lesser bandwidth) responsibility. At GreenClouds, we try our bit.