

How 'green' a technology is case study sample

[Business](#), [Company](#)



The fact that the world only bears a fixed level of natural resources creates a considerable shortage, as some are either depleted or ruined. Therefore it is important to ensure that the technology that is used around the world meets this requirements. According to the website many technology companies including Microsoft, Google, Apple and Facebook aim at ensuring that they are carbon neutral by reducing the amount of energy that is consumed in their datacenters. In addition, organizations such as Greenpeace task themselves with ensuring that IT firms ensure that they have 'green' operations (Greenpeace International, 2012). Therefore, this paper seeks to evaluate the green technology being adopted by companies such as Microsoft and Google as well as carrying out a cost benefit analysis of the technology that has been adopted by these companies.

When it comes to data centers owned by IT firms such as Microsoft or Google, power usage is an important factor when it comes to green technology. Production processes and energy-efficient machinery will lower the amount of energy, which is consumed by each company. Such energy efficiency will carry intrinsic benefits other than the simple cost savings. This means that lower energy consumption will eventually slow the overall exhaustion of all non-renewable resources like oil and at the same time; reduce the overall workload for the power utility companies that will in turn lower all the total emissions (Brusseau 2011). This can be measures in kilowatts per hour. Environmental factors are the third category of consideration. Any manufacturing company may choose to switch to green technologies for the purposes of reducing all the negative effects on the immediate environment (Sirvaitis 2010).

There are goals, which inform developments in such a rapidly growing field. They include sustainability, which is meeting all the needs of the society in a way that indefinitely continues into a near future without depleting or damaging natural resources (Wiedmann, Buxel & Walsh 2002). This will mean that meeting present needs and not compromising any ability of further generations in meeting their own needs (Hallman 2001). The element of 'Cradle to cradle' design is also a major consideration in evaluating the goals of green technology. Putting an end to the 'cradle to grave' routine cycle of various manufactured products through the creation of products, which are fully reclaimed or re-used, is therefore critical (2011).

Developing green and implementing technology that is environmentally friendly particularly offers a wide scope of benefits to most businesses. Additionally, financial benefits enable the companies to use green technology in creating a sustainable image for purposes of responsibility as well as appealing to the environmentally conscious groups of consumers (Shen 1999). Companies such as Microsoft and Google are fast being viewed as environmentally conscious companies that take the issue of sustainability seriously. Similar to all other investments, it is efficiently in line to duly measure the overall success rates of green technology through the implementation of various key indicators, which continuously measure the effects of technology on several aspects of the business (Flagstad 1994). One of the areas of measuring the efficiency of green technology is cost savings. The reduction of energy bills will later top the list for reasons through which businesses continue implementing green technology in their daily operations (Hoffman, Novak & Peralta 1999).

Source reduction involves all attempts aimed at reducing pollution and waste through altering the changing production and consumption patterns. The level of innovation will involve the development of alternatives to various technologies irrespective of their fossil fuel nature or chemical intensive agriculture, which has been demonstrated to be damaging to the health as well as the environment (Green 2002). The other goal is viability, which is the creation of centers of economic activities around various technologies and products, which generally benefit the environment. This also places emphasis on speeding their implementation process as well as creating new careers, which are truly protected by the planet (Madrigal 2011).

For instance, household batteries as well as electronics usually contain dangerous chemicals, which have a high potential of polluting the groundwater in times of disposal, which later contaminates the soil as well as water with the constituent chemicals, which are not removed from the respective drinking water supply (Harris 2008). Consequently, the impacts of the risks to quality of human health are considerably great. Some of the best-known green technology examples include the solar cell. s directly converts the energy brought about in the form of light into a form of electrical energy in a process of (Kim 2011). The generation of electricity from such solar energy will mean that there is less fossil fuel consumption, which also reduces pollution as well as other greenhouse gas emissions (Worthington 2009). The principles revolving around green procurement include , , and .

It is for this reason that business owners need to consider the initial investment that is usually larger as compared to the investment that is

required in various traditional energy technologies. This means that the overall per-unit savings that are offered under the green technologies will essentially cover all the extra costs of investment across the determined time (Coad 2012). However, the eventual bringing together of the company into positioning the continual cost savings will enable the businesses measure cost savings in the form of percentage decreases for expenditures. Clearly, green technology has the potential of reducing pollution within the air as well as water and at the same time, reduces the level of toxic byproducts, which are created due to the manufacturing processes. Such changes greatly benefit the employee health as well as the health of other community members (Bouée 2010). This, in turn, lowers the costs, which are related to compensation for workers and subsequent forms of litigations for liability. Ideally, pollution is rather challenging to evaluate as compared to other performance indicators (Rubino 2008). This can be based on the consideration of the utilization of the services of environmental auditors to frequently measure the level of emissions.

It is also important to evaluate the scope of regulatory compliance.

Irrespective of the available myriad of sustainable benefits, which green technology, continue providing to businesses as well as their stakeholders, companies may implement technology that is environmentally friendly for the sole aims of complying with regulations that are imposed by government agencies or industry groups (Bollinger 2011). In such a case, the level of compliance with such regulations is one of the most critical indicators of success. The measure of regulatory compliance is quite simple (Porter 1985). It is either there is a general satisfaction with the regulations or not.

Energy and environment preservation has a broad scope range of potential capabilities aimed at developing and delivering various green technology projects. Specialist teams and engineers are placed in a good position of assisting clients in developing and validating a range of environmentally friendly technologies (Albarran 2000). These will encompass commodity recovery and waste treatment through to and . Such a level of assistance is provided across all stages of the development irrespective of the fact that it is an initial idea, laboratory scale trials, proof of concept study, pilot plant or process scale-up design (Webber & Wallace 2009). There is need to excel in the development, implementation and planning of bespoke R&D schemes.

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