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TECHNOLOGY

No, Digital Media is Not Green

by David Salisbury

Because we do most of our work and consume most of our media on digital devices, it is easy to assume that we are being more eco-friendly. But is digital media as green as many believe?

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Because we communicate and get most of our information via digital mediums, it's easy to believe that we are more eco-friendly than we used to be. Unfortunately, that is simply not the case. 50 million tons of e-waste is generated each year according to a recent Fortune article. This includes pollution caused by TVs, VCRs, DVD players, video cameras, stereo systems, telephones, and computer equipment.

A mere 15% of these discarded products get recycled. Hazardous substances such as cadmium, lead, mercury, and even cyanide poisons the soil and water when they end up in the landfill. And if incinerated, they can emit toxic gases. This amount of e-waste will only continue to grow as cell phones, computers, and other data devices become more affordable and superior to older models. Thus, It's important to recognize how digital media is not as "green" as you may think.

Too Much Energy Use

As more people continue to use electronic devices, global electricity usage has shot up significantly to meet the high demand. Aston University Professor of optical communications Andrew Ellis estimates that 8% of UK energy generation is used by the internet, and if the trend continues uninterrupted it could consume all UK power by 2035. Wifi use increased by 460% from 2012 to 2015 and increased the carbon footprint from 6 megatons of CO2 to 30 MT. Up to 90% of this consumption is attributable to wireless access network technologies, while data centers account for 9%.

Data centers and cloud services also use large amounts of energy space. Our consumer appetite for digital services means that data centers, which are the networked computer servers used for storage, processing, and distribution of data, now equate to 2% of global GHG emissions, similar to the airline industry. What's worse, this figure is expected to double by 2020. Which means each time you share that adorable "kitty wrestling with an otter" video, there is a serious environmental price being paid for it.

Sounds Good On Paper

We've heard since the ascendency of digital media that to "go paperless" was a great step in making our day-to-day activities greener and to lower our carbon footprint. However, with the above research showing our online use to be as environmentally detrimental as commercial air travel, it's time to reconsider those well-intentioned assumptions.

What's more, even with our growing dependency on digital media, our dependency on paper has not actually decreased. It's estimated paper mills will be producing 500 million tons of paper goods by 2020, with pulp being the 3rd largest source of industrial air pollution. However, because we tackled our paper problem by established recycling methods, 65% of paper in the US was recycled in 2012 which makes paper now the nation's most recyclable commodity. And according to the United States Department of Agriculture's Forest Service, forest coverage in the Midwest through the upper east coast has actually increased by 28% over the past century. The same cannot be said for digital appliances, as despite efforts from manufacturers like Apple, a common recycling infrastructure for digital devices and products has not yet been established. Digital goods need to also be treated as recyclable commodities to reduce their environmentally deleterious effects too. Earth Balance

In the CMR article "Moving to a Circular Economy in China: Transforming Industrial Parks to Eco-industrial Parks," the Nanjing Chemical Industrial Park engaged in closed-loop eco-industrial transformation to extend value chains by building products around existing wastes. By reusing by-products like carbon dioxide, sulfur, and hydrogen to make new products, the company not only reduces their carbon footprint, but increases company value by using waste to create beverage, cement, and sulfuric acid production.

This is also the primary incentive for digital manufacturers to recycle their goods as they have valuable materials like gold, palladium, platinum, rhodium, ruthenium, selenium, iridium, indium, copper, nickel, and cobalt that can be reused. This can reduce the costs of digging up or purchasing more precious materials to maintain production. Creating a circular closed-loop economy would be good for the planet, for business, and for a company's brand as a good corporate citizen. But like digital producers, consumers are also too comfortable with the ultra-convenience of just replacing obsolete or broken devices rather than upgrading or recycling them. One must eliminate the false comfort that they're "being green" simply because they use less paper. Higher awareness for our use of technology at a corporate and consumer level is a must.

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