ELECTRONIC COMMUNICATION

As global demand for resources continues to grow, a sustainable future will depend heavily on the use of products that are highly recyclable and based on renewable materials and energy, as opposed to non-renewable materials produced with fossil fuel energy. Paper is well positioned given its unique sustainable features.

"Go paperless, go green" is a common claim that encourages us to switch to electronic transactions and communications. But are appeals to help the environment by eliminating paper based on sound science or on marketing strategies?

The responsible manufacture, use and recycling of print and paper contribute to long-term sustainable forest management in North America and help mitigate climate change. Print and paper will remain an important element in our media mix, and will also continue to provide social and economic benefits that contribute significantly to the well-being of North American businesses and citizens alike.

Environmental marketing rules are often broken

- A study by Two Sides found that half the leading Fortune 500 telecommunications companies, banks and utilities were making unsubstantiated claims about the environmental benefits of electronic billing. In response, Two Sides initiated a campaign to educate senior executives on the sustainability of print and paper and to encourage them to abandon misleading environmental claims. As of June 2019, 120 North American companies and over 440 globally have removed or changed inaccurate anti-paper claims.[1]
- Marketing claims like "go green, go paperless" do not meet guidelines for environmental marketing established by the U.S. Federal Trade Commission and the Competition Bureau of Canada. Marketers must ensure that all reasonable interpretations of their claims are truthful, not misleading, and supported by reliable scientific evidence.[2, 3]
- A recent consumer survey commissioned by Two Sides in the U.S. and Canada showed that 58 to 61% of respondents agreed that claims about switching from paper to digital being better for the environment were made because the sender wants to save money.[4]

Digital information has an environmental impact

- "The material footprint of digital technology is largely underestimated by its users, given the miniaturization of equipment and the "invisibility" of the infrastructures used. This phenomenon is reinforced by the widespread availability of services on the "Cloud", which makes the physical reality of uses all the more imperceptible and leads to underestimating the direct environmental impacts of digital technology."[5]
- In 2015, the global energy footprint of the ICT sector was 805 terawatt hours (TWh) or 3.6% of global energy consumption.[6] The share of digital technology in global GHG emissions could reach 8% by 2025, i.e. the current share of car emissions.[7]

Print and Paper have a great environmental story to tell

TWO SIDES

www.twosidesna.org

- The energy consumption required for digital technologies is increasing by 9% each year.[5] Depending on the level of energy efficiency achieved, projections for ICT energy consumption by 2025 range from 3.2 to 7.5% of total global energy use.[5,8]
- Cloud computing is rising rapidly and is expected to increase by almost 20% each year until 2020.[9] In 2014, data centers in the U.S. consumed an estimated 70 billion kWh, representing about 1.8% of total U.S. electricity consumption. Based on current trend estimates, U.S. data centers are projected to consume approximately 73 billion kWh in 2020.[10] This energy consumption does not include the energy required to build, power or recharge the devices.
- An analysis of 113 ICT companies in the U.S. showed that 14% of the energy consumed was from renewable electricity in 2014.[12] This compares to about 66.6% of AF&PA member facility energy needs met by carbon-neutral biomass and renewable fuels in 2016.[13]

E-waste is a growing problem

- "By 2016, almost every person in the United States owned a smartphone and every second person also owned a tablet computer. Close to 25% also owned an e-book reader." Since technologies change rapidly, many users change devices regularly; often before it actually breaks. Average replacement cycles are becoming shorter. The average smartphone lifecycle in the USA, China and major EU economies does not usually exceed 18 to 24 months.[14]
- "Increasing levels of electronic waste, and its improper and unsafe treatment and disposal through open burning or in dumpsites, pose significant risks to the environment and human health." In 2016, Asia was the region that generated the largest amount of e-waste (18.2 Mt), followed by Europe (12.3 Mt), the Americas (11.3 Mt), Africa (2.2 Mt), and Oceania (0.7 Mt). Globally, only 20% of all the e-waste generated was recycled. The whereabouts of the remainder of the e-waste is largely unknown.[14]
- The USA collected approximately 1.4 Mt of e-waste in 2016, which is 22% of the e-waste generated.[14] This compares to a U.S. paper recovery rate of 68.1% in 2018.[15] Data centres on their own could produce 1.9Gt (or 3.2% of the global total) carbon emissions.[11]
- E-waste contains precious metals including gold, silver, copper, platinum and palladium; valuable bulky materials such as iron and aluminium along with plastics that can be recycled. It also contains rare earth and scarce metals as well as hazardous materials such as mercury, lead, cadmium, fluorocarbons or various flame retardants.[14]
- The increasing need for raw materials (especially for rare earth and minor elements) and unregulated e-waste recycling operations in developing and underdeveloped counties contribute to the growing concerns for e-waste management.[16]

Sources

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