"Information TECHNOLOGIES are better than paper"

THE REALITY

➤ Contrary to popular belief, online activities are a major contributor to **global warming**.

➤ **E-waste** is an ever increasing environmental problem.

➤ Paper is an indispensable part of our **civilisation**.

➤ Paper is made from **renewable** raw materials.

Electronic communication must be recognised as delivering efficiency but not necessarily more sustainability. Think about it: Technology companies must source their raw materials, manufacture and ship the Internet's hardware: servers, personal computers, iPhones, et cetera. Then those devices must be powered and cooled, drawing electricity from their local grids, energy that is generated in different ways, including by coal plants[1]. In France for example, greenhouse gas emissions that come from internet searches alone represent 287 kilotons in CO_2 equivalent[2]. All monthly google searches are equivalent to 260 000 kg CO_2, which could power 4,239 average homes for one month[3]. IT technologies now account for 0.86 metric gigatonnes of emissions a year or about 2 per cent of the emissions added to the atmosphere globally. By 2020, they will account for about 3 per cent of all emissions: 1.54 metric gigatonnes[4].

"Please consider the environment before printing this email" is a well-intentioned email tagline inspired by a sincere desire to help the planet. We appreciate and applaud people who are sensitive to environmental issues. But it is okay to print. Paper is a recyclable, biodegradable and reusable substance whose raw material -wood- is renewable. On the other hand, making a computer typically requires the mining and refining of dozens of minerals and metals, including gold, silver and palladium, as well as the extensive use of plastics and hydrocarbon solvents. According to a UN study the construction of an average 24-kilogram computer and 27-centimetre monitor requires at least 240 kilograms of fossil fuel, 22 kilograms of chemicals and 1,500 kilograms of water – or 1.8 tons in total, the equivalent of a rhinoceros or sports utility vehicle[5]. The lifespan of a computer is short, and electronics have become the fastest growing waste stream in the world. In fact, 10 million tonnes of e-waste is generated per year in the EU with only 2 of them being recycled.

Meet Paper

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Paper has been around for almost two millennia and it has proven itself an effective and enduring method of transmitting information. While there is no question about the convenience or scope of the information available online, experts are discovering that if you are trying to learn something, in many cases it is easier to do using printed documents. Douglas Rushkoff, a professor from New School University[7] pointed out that we don't slow down to read things or go into issues in depth when we read from a computer. We skim the page, often while doing something else, and fail to assimilate much at all. According to researchers from Wayne State University, reading on paper is actually 10-30% per cent faster than reading online, in part because it is easier to track where the reader is on the page[8]. A Cambridge study[9] further concluded that to learn, you need to summarize, and to summarize you need to understand a topic in-depth, which is often more difficult online.

Paper is still used in every corner of the world every day. We read newspapers, magazines and books, we expect goods to be properly packed, and we need paper for our daily hygiene. The fact is that every decision to communicate has some impact on the environment. Whether we email or send a letter, we consume energy and resources. There is no simple 'right answer' and the question is not 'information technologies or paper' but rather how the two can complement each other for minimum environmental impact.

1. Carbon footprinting the Internet, Gombiner, Columbia University
2. Analse comparée des impacts environnementaux de la communication par voie électronique - Complément, p.20, July 2011y
3. Powering a Google search
4. McKinsey Quarterly, Information Technology, October 2008, 'How IT can cut carbon emmissions'
5. "Computer manufacturing soaks up fossil fuels, UN unversity study says"
6. Statement by Commissioner Potocnik on the new directive on waste electrical and electronic equipment (WEEE)
7. The decade Google made you stupid
8. Reading Online or on Paper: Which is faster?
9. A Comparison of Reading Paper and On-Line Documents

Meet Paper

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