

## Digital Technology and Environmental Issues

Digital technology is having a growing impact on the environment. According to Statista, a market data firm, more than 4.66 billion people will regularly spend time online in 2021. That's almost 60% of the world's population!

The digital sector is currently responsible for 4% of greenhouse gas emissions—roughly the same as the aviation sector (Jean Kearns, MaRS Discovery District).

It's important not to dismiss the Internet as something invisible or immaterial. In fact, the Internet depends on servers—machines you can see and touch. Servers are computer systems that store and manage data. They're an essential piece of the Internet. A single data centre can house thousands of Internet servers. Data centres handle everything you do and everything you search for online. And they consume a lot of energy.



### Statistics

- Sending an email produces 4 grams of CO<sub>2</sub>.
- Over the course of a year, online pornography produces as much CO<sub>2</sub> as the entire country of Belgium.
- If adults in the UK stopped responding “Thank you” when they receive an email, it would reduce annual CO<sub>2</sub> emissions by 16,433 tons.
- In 2019, humans produced 53.6 million tons of electronic waste worldwide.



### The Ecological Footprint of Computing Devices

These four good habits can help reduce the environmental impact of your devices:

- Making responsible purchases.
- Repairing and maintaining your devices.
- Conserving as much energy as possible.
- Properly disposing of your devices through available recycling programs.



### Forms of Planned Obsolescence

- **Technical Obsolescence:** When a device stops working because one of its components has worn out.
- **Style Obsolescence:** When a company offers a new product with much better features, making the previous product seem obsolete.
- **Software Obsolescence:** When the new software release or a new version of an application renders previous versions obsolete.

## A Device's Life Cycle



## Energy Conservation

ENERGY CONSUMPTION BY DEVICE TYPE	
DEVICE	ENERGY CONSUMPTION
Smartphone	Between 2 and 7 kWh/year
Tablet	Between 5 and 15 kWh/year
Monitor	Between 20 and 100 kWh/year
Laptop Computer	Between 30 and 100 kWh/year
Desktop Computer	Between 120 and 250 kWh/year
Router (Internet + TV)	Between 150 and 300 kWh/year

**Your router uses as much power as your refrigerator!**



### Solutions:

- Unplug and turn off your devices.
- Don't leave chargers plugged in when not in use

## Reassessing Your Internet Use

Because data centres consume a lot of energy (see above), Internet use has a significant environmental impact.

Video streaming, emailing and web browsing all have large carbon footprints. Below, we'll discuss some simple ways of reducing your energy use and carbon footprint when you're online.



### VIDEO STREAMING

- Use Wi-Fi instead of a mobile data connection.
- Download videos you plan to watch multiple times.
- Select a lower video quality setting (avoid HD and Ultra HD).
- Watch fewer videos.



### EMAIL AND MESSAGING

- Only send emails when necessary.
- Send shorter emails.
- Clean out your inbox.
- Install anti-spam software.
- Unsubscribe from newsletters.
- Whenever possible, use chat software rather than email.



### WEB BROWSING

- Whenever possible, enter a URL rather than using a search engine.
- Use as few keywords as possible when searching.
- Whenever possible, use search engines without interactive content.
- Use fewer widgets.
- Enable dark mode on your web browser.
- Whenever possible, use your bookmarks instead of a search engine.

## Eco-anxiety and Social Engagement



Does discussing these topics make you feel anxious? You may be experiencing eco-anxiety.

According to the Canadian Mental Health Association, eco-anxiety is a deep fear of environmental doom and human catastrophe. It can bring on the same kinds of symptoms as anxiety—like panic attacks and sleeplessness—as well as depression.

According to eco-sociologist Laure Waridel, citizen engagement provides the best protection against eco-anxiety. We need to take simple steps that focus on the solution, not the problem. The key is to pursue actions that are aligned with your values, and to go easy on yourself if you don't accomplish everything you set out to do.

Social engagement can take many forms, from individual action to community and political involvement. Of course, like any other form of anxiety, eco-anxiety can become overwhelming. When eco-anxiety becomes more of a hindrance than a source of motivation, you should talk about it and seek out appropriate help.

Libraries are committed to a greener future. They have an important role to play in meeting the sustainable development goals set by the United Nations. Simply using the shared resources available at the library—including books, DVDs and CDs—can have a positive impact on the planet.

Many libraries are going even further. Here are some examples of green initiatives related to digital technology:

- Electronic repair workshops.
- Computer equipment loans (desktop computers, laptops, printers, etc.).
- Efforts to raise public awareness about environmental issues in the field of computing.

Do you have any ideas for green projects in your community? Contact your librarian to ask for help with your project! People like you can inspire others in your community to take collective action for a greener future!

## Resources

- The Crewdle videoconferencing system: <https://crewdle.com>
- The Ecosia search engine: <https://www.ecosia.org>
- The Lilo search engine: <https://www.lilo.org>
- The Earth Definition video streaming service: <https://www.earthdefinition.org>
- The Enviro-Gadget website <https://www.envirogadget.com>
- Insertech (workplace integration organization) <https://www.insertech.ca/en/>
- The Recycle My Electronics website <https://www.recyclemyelectronics.ca/>

## Sources

[Statista](#), [Oberlo](#), [BonCap](#), [Pewresearch](#), [Indiana University](#), [CJAD](#), [Data Map Center](#), [BBC](#), [Our World in Data](#), [The New Yorker](#), [European Parliament](#), [Right to Repair Europe](#), [BBC](#), [Stop Planned Obsolescence](#), [Insertech](#), [Ciraig](#), [Hydro-Québec](#), [Recycle My Electronics](#), [The Shift Project](#), [Greenspector](#), [The Carbon Literacy Trust](#), [WHC](#), [Scientific American](#), [University of Vermont](#), [UNDP](#), [American Library Association](#), [Crewdle](#), [Ecosia](#), [Lilo](#), [Earth Definition](#), [Envirogadget](#)

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