

# THE STORY OF E-WASTE

THEN → NOW → FUTURE

FUTURE

## THEN

### NEW INVENTIONS AND INNOVATIONS

**1835**

First constant electric light was demonstrated in Britain.

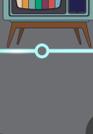


**1876**

Alexander Graham Bell was awarded the first U.S. patent for the invention of the telephone in 1876.

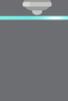
**1927**

First successful electronic television transmission is made.



**1879**

Thomas Edison created a carbon filament that allowed incandescent lightbulbs to glow for up to 40 hours.



**1962**

First LED light is created.



**1956**

Solar cells become commercially available, appearing in small appliances and electronics.



**1964**

First prototype of the modern computer, with a mouse and a graphical user interface, that is designed to be accessible to the general public.



**1973**

The first cellular phone is invented with a then purchase price of \$3,995, 30 minutes of talk-time, and requiring 10 hours of recharge.



**1976**

Steve Jobs and Steve Wozniak start Apple Computers and roll out the Apple I, the first computer with a single-circuit board.



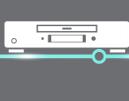
**1981**

Sony introduces the first 3-inch floppy drives and diskettes.



**1982**

The world's first compact disc player is released.



**1984**

Apple releases its first Macintosh computer, the first successful mouse-driven computer with a graphical user interface.



**1985**

First cellphone conversation in Canada is held between Art Eggleton and Jean Drapeau, then the mayors of Toronto and Montreal on July 1, 1985.



## THEN

### THE RISE OF E-WASTE

**1992**

Canada, along with 20 countries ratifies the Basel Convention in response to concerns of hazardous waste (including e-waste) being exported to developing countries for cheap, unsustainable disposal options.



**1989**

Silicon Valley - once a major industrial site for semiconductor and microprocessor production - is declared a Superfund site by the EPA, a designation to some of the most contaminated or polluted land in the United States.

SILICON VALLEY

**2001**

The first iPod is launched, which goes on to sell more than 400 million units over the next 20 years.



**2003**

Champion of the Right to Repair movement, Kyle Wiens begins iFixit - a website that empowers consumers to repair their electronics by offering repair guides, community forums, and repair kits.



**2007**

The first iPhone is released.



**2004**

Alberta launches Canada's first provincial program for e-waste recycling.



**2008**

Canada diverts 24,367 metric tonnes of e-waste through diversion programs.



**2012**

Canada diverts 71,000 metric tonnes of e-waste through diversion programs, a significant increase from 2008 as more programs were introduced during this time period to recycle electronics.

**2013**

According to Statistics Canada, 85% of households in Canada own at least one cell phone. Advances in cell phone technology often results in their replacement after only eighteen months.



## NOW

### CURRENT STATE OF E-WASTE

**2013**

The Right to Repair concept originated in the US to target automobile repairs in the automobile industry. As a result, The Repair Association (TRA) was founded and encompassed the same principles towards electronic products.



**2016**

Global E-Waste Monitor 2017 reveals that global e-waste generated in 2016 equaled 44.7 million metric tonnes, equivalent to 525,883 full Boeing-737 aircrafts.



**2018**

World Economic Forum (WEF) reported e-waste as the fastest growing waste stream in the world.



**2017**

Canada generates an estimated 638,300 tonnes of "e-scrap" (electronic and electrical equipment) according to the Brussels-based Bureau of International Recycling.



**2019**

Global E-Waste Monitor 2020 reveals that global e-waste generated in 2019 equaled 53.6 million metric tons, equivalent to the weight of 350 cruise ships the size of the Queen Mary 2, or enough to form a line 125 kilometres long.



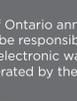
**2020**

France is set to be the first European country to implement a reparability index as part of the EU's proposal legislating the "right to repair".



**2021**

Government of Ontario announces producers will be responsible for managing the electronic waste (e-waste) generated by their products.



**2021**

Half of the United States (25 states) are now considering Right to Repair laws as part of a push to promote consumers access and ability to repair the products they own.



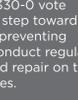
**2021**

Canada's Recycle My Electronics program has a network of over 2,500 drop-off locations throughout the country, including return-to-retail locations and special collection events.



**2021**

A Canadian Right to Repair bill, Bill C-272 sees 330-0 vote marking a huge step towards bypassing laws preventing consumers to conduct regular maintenance and repair on their electronic devices.



**2021**

New global pact to accelerate circularity in Information Communications Technology (ICT) sector is launched. Circular Innovation Council joins as participant for Canada.



Advancement in technology has had many benefits to society, including connecting people from all over the world instantaneously. However, with these advances has come a rapid generation of e-waste. To achieve a circular economy, greater care and consideration must be put into product design to ensure we are extending the useful life of products and conserving valuable resources.

### Extended Producer Responsibility (EPR)

Shift responsibility for collection and management of e-waste from taxpayers to producers that bring products to market. EPR incentivizes product innovation and the implementation of take-back or buy-back programs for old equipment.



### Repair

Make products that are easy to repair and provide resources that empower consumers to repair their devices and pass these skills down to future generations.



### A Circular Economy for Electronics

#### Individual behaviour change

Use the gadgets you already have for as long as possible. Repair broken products and consider purchasing used or refurbished before purchasing new. Resell or swap unwanted electronics before recycling.

### Resource Recovery

Conserve resources by recovering materials already in circulation. Electronics recycling can be facilitated through collection events, drop-off depots, and retail electronic collection programs.

