

Environmental Programs

Waste management

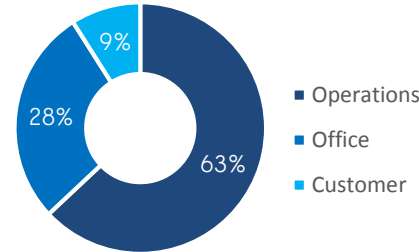
A company’s business model directly impacts the amount of waste it generates. Generally speaking, companies with greater vertical integration are responsible for a more significant proportion of their activities’ waste.

Unlike other telecommunications companies, our installation and construction are integrated functions, so we manage our network waste ourselves. Outsourcing such functions would allow us to reduce our waste-to-landfill results, but we would not be able to maintain direct control over functions that directly impact customer service and operations.

To minimize the amount of waste sent to landfill, Bell runs several programs to reduce, reuse, recycle or repurpose the products and materials required to operate our business.

In 2016, waste from operations represented 63% of all waste produced at Bell. Waste from offices generated 28% of our waste. Waste from customers represented 9%.

Overall waste



Waste (tonnes)

| | 2016 | % diverted | Change (pp) |
|----------------------------------|--------------|------------|-------------|
| Operations | | | |
| Fleet ¹ | 460 | 100 | - |
| Hazardous materials ² | 1,423 | 100 | - |
| Packaging products ³ | 913 | 81 | - |
| Hardware ⁴ | 14,948 | 59 | - 8 |
| Office | 7,807 | 68 | + 7 |
| Customers⁵ | 2,624 | 100 | - |

We diverted 65% of operational waste from landfill and 68% of office waste. 100% of customer waste is diverted from landfill every year.

¹ Tires, batteries, oil and filters, used engine antifreeze, and cleaning solvents
² Lead-acid batteries, alkaline batteries, fluorescent tubes, oily containers, contaminated rags and absorbents, aerosols and other pressurized containers, paints, solvents, and glues
³ For network equipment, such as wood pallets, cardboard boxes and plastic wrap
⁴ Telecom materials, such as cables, terminals, utility poles and cable reels
⁵ TV receivers, mobile phones and accessories



We noted a decrease in the diversion rate, mainly due to fewer removal projects for big cables, for which most of the material is usually recycled. We still face a challenge with fibre optic cable, which cannot be recycled or reused at this time. We continue to seek partners to explore ways to valorize this material.

Also, the number of battery removal projects fluctuates year after year; a year with fewer projects can affect Bell's diversion rate significantly.

The success of upstream reduction efforts (paper consumption, packaging reduction, etc.), can also reduce recycled material quantities. Consequently, we believe that a diversion rate may not be the best way for Bell to represent our waste management efforts implemented across the company. Therefore, we are currently evaluating more relevant and representative measures for waste management.

We support the Centre de formation en entreprise et récupération (CFER), a school that teaches useful skills in recovery and refurbishing to young people without a secondary school education. CFER collects and sorts recyclable materials generated at 16 of our work centres in Québec.

Waste from operations (Field, Fleet and Network)

Bell has been recovering residual materials from operations for more than 3 decades. Telecommunications cable, terminals, utility poles, cable reels, wood pallets, lead-acid batteries and some hazardous materials produced by Field, Fleet and Network activities are reused and recycled.

HAZARDOUS RESIDUAL MATERIALS (HRMS)

Objectives of hazardous waste management program

- Minimize the purchase of hazardous materials
- Recover all hazardous materials used in Bell's operations
- Minimize the landfilling and the incineration of hazardous materials by maximizing reuse, recycling and energy recovery
- Ensure the transportation of residual dangerous goods complies with regulations
- Maintain all required documentation with regard to the shipping of hazardous materials
- Have comprehensive information on the hazardous material inventories at the recovery centre and be able to effectively communicate this information
- Ensure the proper management of batteries owned or serviced by Bell and removed from client premises.
- Inform customers on proper disposal methods for batteries

By law, some residual materials are defined as hazardous, because they may be a threat to human health or the environment. Federal, provincial and municipal laws and regulations strictly regulate the management of these hazardous materials, especially when stored, transported or sent for disposal. When these materials are not disposed of properly, contaminants can enter the atmosphere or migrate through the soil and pollute groundwater, affecting drinking water quality.

Bell collects hazardous materials generated by its operations and manages them according to the most rigorous standards. Some materials are recovered and managed centrally, including batteries, small non-spillable batteries, oily containers, contaminated rags and absorbents, aerosols and other pressurized containers, paints, solvents, and glues. The special containers used to collect these hazardous materials



are sent to the Hazardous Materials Recovery Centre in Laval, Québec. At this site, we sort and store the materials before returning them to stock, recycling them or sending them for safe disposal.

In some cases, materials generated from Bell's operations are managed locally, such as at work centres, at switching centre, and in Bell stores. In such cases, the local site deals with transportation, recycling and disposal suppliers directly, and ensures these materials are properly managed with the help of the Corporate Responsibility and Environment team. Federal, provincial and municipal laws and regulations regulate each step of local hazardous residual material management.

We promote efficient use of potentially dangerous products to minimize our environmental impact. In addition, we reduce our financial impact on the company by procuring cost-effective products. Bell has implemented an evaluation process for new "controlled" products to achieve this.

The Corporate Responsibility and Environment team continually gathers information on new products to be introduced into company operations, assessing them based on best operational practices and environmental impact.

Waste from offices

Bell's reuse and recycling programs also address residual materials such as electronic waste, toner cartridges and office furniture. In 2009, we began our Sort-It program, which encourages employees to sort their waste at central stations by separating paper, cardboard, glass, steel, aluminum and organic matter. 64 sites (up from 15 sites in 2015) now offer this program, representing more than 65% of office employees. In 2017, we plan to add 32 more buildings.


In 2016, we reused and recycled 88 tonnes of computers and peripherals, and 7 tonnes of toner cartridges.

Waste from customers

We recovered 2,624 tonnes of customer-facing products in 2016, including TV receivers, modems, mobile phones and accessories.

Customer-facing electronic devices recovery

| | Trend | Amount collected 2016 | Amount collected 2015 |
|---------------|----------|-----------------------|-----------------------|
| | | (units) | (units) |
| TV receivers | ↑ | 1,103,000 | 1,010,000 |
| Modems | ↑ | 946,000 | 925,000 |
| Mobile phones | ↑ | 289,000 | 210,000 |
| Corded phones | ↓ | 8,400 | 10,800 |
| Total | ↑ | 2,346,400 | 2,155,800 |
| | | (tonnes) | (tonnes) |
| Batteries | ↑ | 31.32 | 19.93 |
| Accessories | ↓ | 1.14 | 4.05 |
| Total | ↑ | 32.46 | 23.98 |



Bell provides customers with programs to help them protect the environment by making it easier to recycle their products, including mobile phones, Bell Internet modems and Bell TV receivers. In 2016, thanks to our customers' participation in our recovery programs, Bell diverted more than 2,600 tonnes of electronics from landfill.

Bell recovers mobile phones through two complementary programs: the Bell Trade-in program and the [Bell Blue Box](#) program. Launched in 2003 and available at all Bell stores, Virgin Mobile stores and participating The Source locations, the Bell Blue Box program was the first cross-Canada collection program established by any company for re-using and recycling mobile phones. Bell donates the net proceeds from the Bell Blue Box program to a partner in the Bell Let's Talk mental health initiative. Combined, the Bell Trade-in program and the Bell Blue Box program diverted nearly 289,000 phones from landfill in 2016, for a total of almost 2.2 million mobile phones, 128 tonnes of batteries and accessories since 2003.

In addition, Bell participates in provincial recycling programs for other electronic products, such as tablets, headsets, TVs, computers and batteries. For more details on these programs, visit our website Bell.ca/recycling. Regarding e-waste stewardship, Bell collected almost 946,000 modems and more than 1.1 million TV receivers in 2016. Recovery is difficult to predict and control, as it relies on the rate at which customers upgrade to newer devices. Recovery is often related to economic activity: in times of economic recession, people upgrade their devices and sign up for new plans less frequently. It is also dependent on customer behaviour. A [CWTA study](#) shows that 40% of Canadians store their old handsets when they acquire new mobile phones. Since we have no control over when or whether a customer returns a device, we are exploring reasonable and achievable performance indicators for the recovery of used products that take into account our limited control over public behaviour.