



Waste management

Diverting waste from landfill

Unlike other telecommunications companies, Bell has integrated much of its installation and construction functions. This makes us accountable for managing a large part of 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 influence customer service and operations.

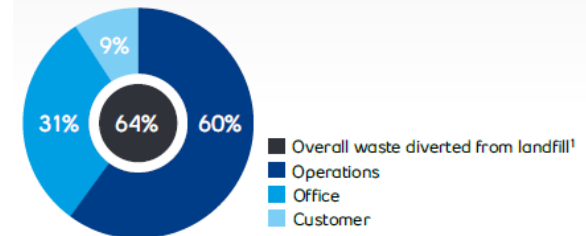
To minimize the amount of waste we send to landfill, Bell runs several programs to reduce, reuse, recycle or repurpose waste generated to operate our business.

In 2017, we diverted almost 64% of waste from landfill, compared to 69% in 2016. Waste from operations represented 60% of the total generated at Bell, while offices generated 31%, and the amount associated with customers represented 9%.

Of the operational waste generated, we diverted 57% from landfill. 67% generated in offices was diverted from landfill, and 100% of customer facing and hazardous waste is diverted from landfill every year.

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. Therefore, we are currently evaluating more relevant and representative measures for waste management.

OVERALL WASTE, 2017



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WASTE (TONNES)

	2017	% DIVERTED	CHANGE (PERCENTAGE POINTS)
Operations			
Fleet ²	500	100	-
Hazardous materials ³	1,115	100	-
Packaging products ⁴	1,217	80	-4
Hardware ⁵	16,303	51	-8
Office	10,035	67	-1
Customers⁶	2,757	100	-

- 1 PwC provided limited assurance over this indicator. Please see [PwC's assurance statement](#)
- 2 Tires, batteries, oil and oil filters, used engine antifreeze, and cleaning solvents
- 3 Lead-acid batteries, alkaline batteries, fluorescent tubes, oily containers, contaminated rags and absorbents, aerosols and other pressurized containers, paints, solvents, and glues
- 4 For network equipment, such as wood pallets, cardboard boxes and plastic wrap
- 5 Telecom materials, such as cables, terminals, utility poles and cable reels
- 6 TV receivers, modems, phones and accessories



A new waste indicator and objective

Over the last 5 years, the year-over-year comparability of our waste management data has been diminished by several factors, the most important of which is major strategic business acquisitions (Q9 Networks, Astral, Bell Aliant). We continue to analyze our waste management data and rethink how we report it.

We set our objective for 2017 to improve our own awareness in each function that generates residual materials and to define an indicator that clearly explains what kind of waste we manage, and in which manner. We continue to analyze our recovery programs to identify opportunities to improve efficiency and to facilitate sorting by team members. Until a new indicator and objective are set, we will continue to report our waste recovery rate, and we will continue to have that data independently assured.

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

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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 properly disposed of, contaminants can enter the atmosphere, migrate through the soil or even leach into groundwater

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. 93 sites now offer this program, representing more than 80% of office employees. In 2018, we plan to add 49 more buildings.

Waste from customer-facing electronic devices

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 2017, thanks to our customers' participation in our recovery programs, Bell diverted more than 2,757 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.

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.

We also 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.

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TONNES OF CUSTOMER-FACING ELECTRONIC WASTE COLLECTED, 2017

ITEM	TONNES
TV receivers	2,036.16
Modems	675.27
Mobile devices	20.31
Batteries	24.67
Mobile phone accessories	1.03
Total	2,757



Recovery is difficult to predict and control, as it depends on the rate at which customers upgrade to newer devices. Often, recovery relates to economic activity: during economic downturns, people upgrade their devices and sign up for new plans less frequently. It is also dependent on customer behaviour. A 2017 CWTA/Recycle My Cell [study](#) reports that 62% of Canadians say they have cell phones in their possession that they are not using and are being stored.

A NEW CUSTOMER-FACING E-WASTE INDICATOR

A few years ago, we stopped reporting our mobile phone recovery rate against an objective, as explained above, and said we would rethink how we report on e-waste recovery overall. We believe that we have an important role to play in the recovery of used electronic devices from customers given our close relationship with them. Beginning this year, we will report on our progress toward our objective of recovering 10 million used TV receivers, modems, and mobile phones between January 1, 2016 and the end of 2020.

The table here details the breakdown of how many of each type of device we have collected in 2016 and 2017.

WE HAVE RECOVERED 4,788,042 UNITS SINCE JANUARY 2016 AND ARE ON TARGET TO MEETING OUR 2020 OBJECTIVE OF RECOVERING 10 MILLION USED TV RECEIVERS, MODEMS, AND MOBILE PHONES

CUSTOMER-FACING ELECTRONIC DEVICES RECOVERY (2016-2017)

	AMOUNT COLLECTED 2017 (UNITS)	AMOUNT COLLECTED 2016 (UNITS)
TV receivers	1,268,793	1,103,220
Modems	1,051,270	945,715
Mobile phones	200,536	218,508 ¹
Total	2,520,599	2,267,443

¹ This data has been restated.

BELL'S CUSTOMER-FACING DEVICE RECOVERY OBJECTIVE

