

# Timeline of Innovation

For decades, CF has led the industry by leveraging sustainability core principles to direct the way we run our business and develop our properties. Our timeline (below) highlights some of the innovative ways we have applied using new technologies and best practices to reduce our environmental impact while enhancing the experience for visitors to our space:

## GREEN TEAMS/COUNCILS

Most CF properties have established Green Teams/ Councils that are responsible for identifying, prioritizing and catalyzing, sustainable practices throughout the property. The work of these groups has advanced our operational efficiency on environmental metrics while engaging stakeholders.

## COMMITMENT TO LEED / BOMA BEST

CF makes national commitment to LEED and BOMA BEST certifications.

## ON-SITE COMPOSTING

The on-site composter in the dining hall of CF Pacific Centre in Vancouver processes food waste and compostable plates, cups and napkins, thereby significantly reducing waste volume by eliminating most of the water in the material. The clean compost is used as nutrient-rich fertilizer. CF Pacific Centre achieved a 70% reduction in organic waste, resulting in a 50% reduction in haulage costs to the organics depot.

## INNOVATIVE COGENERATION

CF Chinook Centre in Calgary installed a 265-kW cogeneration unit, which simultaneously produces heat and power using clean-burning natural gas. This cutting-edge technology lowers greenhouse gas emissions by about 9,700 tonnes per year by capturing waste heat from electricity generation and using it to offset 75% of the heating needs.

2005

2008

2009

2013

2014

## DEEP LAKE WATER COOLING

CF was one of the first companies to use the Enwave Deep Lake Water Cooling system to significantly reduce GHG emissions at all of its office properties located in downtown Toronto. The system transports cold water from 83 meters below the surface of Lake Ontario to Enwave's closed-loop chilled water network, which then distributes the water to air condition our buildings.

## LAUNCH OF GREEN AT WORK (R)

CF launches its industry leading, national sustainability program, Green at Work®. The foundational program enables CF to deliver on its sustainability targets while serving as a model for our industry peers.

## REUSABLE DINING HALL DISHES

CF Carrefour Laval in Quebec launched the first dining hall in Canada to offer patrons re-usable food wares, significantly reducing waste. The scullery washer cleans up to 14,000 dishes per hour, while using only 5 ml of water per dish.

## WORLD-LEADING GEO-EXCHANGE RETROFIT

777 Dunsmuir Street in Vancouver implemented the first geo-exchange retrofit of an occupied, high-rise complex in a city core. The project involved drilling 30 boreholes 400 feet into the earth below the existing structure. Georexchange reduces the energy costs and greenhouse gas emissions associated with traditional heating and cooling.

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## LIVING ROOFS

CF Sherway Gardens has installed one of the largest living roofs in the Greater Toronto Area. Measuring approximately over 100,000 square feet, the roof is planted with native drought-resistant creek sedge grass which reduces storm run-off, provides cooling through evapotranspiration, reduces heat island effect and contributes to better air quality.

## ENERGY SMART OPERATIONS

In 2016, CF launched the Energy Smart Operations program, utilizing smart buildings technology, to enable real-time energy management, monitoring, and reporting as well as providing fault detection, energy visualization and analytics.

## WELL CERTIFICATION

In 2017, TD Centre's 222 Bay Street tower became North America's first existing building to achieve the prestigious WELL Building Standard™ certification (Gold – Core and Shell).

## ENERGY STAR CERTIFICATION

Yonge Corporate Centre, Simcoe Place, and Deloitte Tower were amongst the first buildings in Canada to receive ENERGY STAR Certification which recognizes superior energy performance.

2015

2016

2017

2018

## DAYLIGHT HARVESTING

Deloitte Tower is Montreal's first office to receive LEED Platinum Core and Shell certification. More than 80% of the height of the dual pane glass wall on all office floors is specially insulated, promoting both energy efficiency and daylight harvesting to significantly reduce power consumption and contribute to overall comfort.

## EV CHARGERS

In April 2017, CF announced the launch of its national electric vehicle (EV) charging program, building on CF's support for the transition to a low-carbon economy in Canada.

## CELEBRATING 10 YEARS OF GREEN AT WORK

CF celebrates the 10th anniversary of our award winning sustainability program, Green at Work®, which has reduced 75,000 tonnes of greenhouse gas emissions since 2008!