

# Innovating for a better world

As an industry leader, we have a responsibility to continually seek new ways to facilitate and accelerate discovery for our customers. Our innovative solutions enable our customers to make the world healthier, cleaner and safer.

## \$700M R&D SPEND

### A world without cancer

The scientific and medical communities are in the pursuit of a lifetime: finding a cure for cancer. We partner with customers in the pharmaceutical industry as well as research and diagnostic laboratories to develop innovative solutions across the healthcare continuum for cancer, from detection to drug discovery. This includes our award-winning Thermo Scientific Orbitrap Fusion Lumos Tribrid Mass Spectrometer, named Best New Drug Discovery Product of 2015 by the SelectScience™ readers and contributors.

The next-generation Orbitrap Fusion instrument is empowering scientists to perform more comprehensive sample analyses faster and with better accuracy. At the Biotech Research and Innovation Centre at the University of Copenhagen, it's being used along with our next-generation sequencing technologies to determine how specific cancer mutations target and damage the protein signaling networks within human cells. Relating this genomic data to proteins may result in the development of new targets for pharmaceutical drugs – and new hope for cancer patients worldwide.



### A world with cleaner water

Our products and resources are being used to provide global communities with access to one of life's most basic necessities: clean water. We partner with several governments and nonprofit organizations to ensure proper monitoring of water contaminants, which is the first step in providing clean water to enable communities and their residents to thrive.

Having passed the stringent CCEP test in China to qualify for environmental testing, the Thermo Scientific Orion 3106 water analyzer can be used to determine whether water can be safely discharged from treatment facilities to rivers and reservoirs. With this technology available, rural communities in China will benefit from cleaner water sources.



Tianjin  
City Center

## A world that can respond to disaster

When disaster strikes, having the proper equipment, training and resources can help save lives. Through innovative technologies and vast supply chain resources, Thermo Fisher provides solutions needed to keep people safe, including first responders.

The explosion in Tianjin was one of the worst disasters in China in 2015. More than 170 people lost their lives and hundreds more were injured. The Thermo Scientific FirstDefender RMX and TruDefender FTX handheld analyzers, enabled first responders to safely, accurately and quickly test thousands of samples for chemical contamination. Providing on-site analysis of chemicals improved their understanding of the situation and kept both first responders and the surrounding communities safe.

In 2015, the Thermo Scientific Gemini handheld analyzer was honored as one of R&D™ magazine's Top 100 Innovations with Editor's Choice honors, as well as a Bronze Innovation award at EuroPolTech. The Gemini analyzer can help prevent disasters by detecting the chemicals used in certain explosives.



Thermo Scientific  
TruDefender FTX

# Making a positive impact

With customers across many end markets, including pharma and biotech, diagnostics and healthcare, industrial and applied, and academic and government, we are in a unique position to help accelerate innovation and enhance productivity for our customers.

Our green leaf-labeled products provide our customers with product alternatives that are less hazardous, are more energy-efficient, create less waste, or use sustainable packaging.



3,000+

GREEN LEAF – LABELED SKUs AVAILABLE

800+

NEW GREEN LEAF SKUs ADDED IN 2015



Thermo Scientific Nunc conical tubes are now packaged in a compact, recyclable rack that eliminates the need to dispose of expanded polystyrene (EPS) racks in the landfill after use.

## Cold storage: sustainability without sacrifice

In 2015, Thermo Fisher made a pledge to the White House to reduce the use of hydrofluorocarbons by transitioning our entire cold storage platform to more environmentally friendly, natural refrigerants. This transition – the first of its kind in the lab products industry – will take place over a five-year period ending in 2020, and will provide a 49-percent reduction in CO<sub>2</sub> emissions. In that same time period, we also plan to reduce the energy consumption of these products by more than 50 percent.

Our new Thermo Scientific TSX Series ultra-low temperature freezer uses innovative technologies to reduce energy consumption and CO<sub>2</sub> emissions by 50 percent compared to conventional freezers. The TSX uses natural refrigerants (water-blown foam); is produced in a zero-waste-to-landfill production site; and is compliant with the EPA's Significant New Alternatives Policy (SNAP).



### TSX highlights

50% lower energy consumption

20% increase in storage capacity

9% reduction in physical footprint

manufactured in zero-waste-to-landfill site