

Recycling a refrigerator from start to finish

A recycling facility is now able to handle the recycling of large household appliances such as refrigerators and washing machines from start to finish and, with automation, is able to do so more efficiently. This is what happens to a refrigerator after it is sent to EWR2 in Tuas.

- 1** The refrigerator is sent to EWR2, where it is dismantled.



- 2** Some parts, such as the motor, will be taken to specialised machinery such as a compressor and a motor cutter, where the copper coil is extracted and then recycled.



The refrigerant, which contains harmful gases, is also properly extracted. Other parts of the refrigerator, such as its plastic shelves and compartments, will also be removed and set aside.

- 3** The refrigerator, now just a frame, will be placed inside the large household appliance recycling machine, where it is crushed into small pieces. The debris is then sorted into materials such as plastic, foam and metals, which are then sold off.



- 4** The circuit board of the fridge is sent to a chemical plant, where a robotic arm dips it into acids that are used to extract precious metals such as palladium. The used acid is then treated so it can be used again.



- 5** An oven is then used to press the precious metals into blocks which are sold off. These precious metals can be used in various ways, such as to make new electrical appliances.

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Meanwhile, the other materials from the refrigerator such as plastic, foam and glass will also be sold to recyclers that deal with these materials.