



Enterprise Ireland  
Disruptive Technology  
INNOVATION FUND



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PerPETual has the potential to transform the plastics industry, by drastically reducing the amount of fresh petroleum extracted virgin material used, and positioning PET recyclate as a valuable, perpetually reusable resource.

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Enterprise Ireland

DISRUPTIVE TECHNOLOGY  
THAT HAS THE POTENTIAL  
TO TRANSFORM  
THE PLASTICS INDUSTRY

PERMANENT  
RECYCLING  
OF PET



H2020 Grant Agreement No. 870292

## What is Virgin Polyethylene terephthalate (PET):

Virgin Polyethylene terephthalate (PET) is made from fossil fuels and is the most commonly used packaging material (carbonated drinks bottles, pots, tubs and trays). It is also used in the manufacture of fast fashion clothing.

## Environmental risks:

Post-use PET presents a major environmental challenge as the majority of it ends up in landfill, incinerators or discarded in the environment for various reasons including fly tipping, and inadequate collection and recycling facilities.

Efficient, scalable PET depolymerization and repolymerization ready for reuse with the same high performance as virgin PET is not currently available at industrial scale.



## PERPETUAL Project:

Funded by Enterprise Ireland, PerPETual is an ambitious Irish project that aims to tackle the problem of plastic packaging pollution.

Teams of innovative researchers from Ireland's newest University – Technological University of the Shannon: Midlands Midwest (TUS), and University College Cork (UCC) have joined forces with experienced industrial partners NovelPlast, producers of high-quality PET resin and Avoncourt, a leading Irish supplier of thermoformed packaging.

## PERPETUAL Process:

PerPETual will for the first time, develop a continuous recycling technology for all grades of PET - spanning pristine bottle grades to low grade PET pots tubs and trays. PerPETual will make a significant contribution towards halting resource depletion, landfilling and incineration of waste plastics, instead converting them into valuable resources and demonstrating the implementation of an Irish circular plastics model.