

SFI Plastics Challenge: Remove, Replace, Recover

The SFI Plastics Challenge will be run within the Future Innovator Prize Programme 2020. This document provides only information on the thematic area of this challenge call. It must be used in conjunction with the SFI Future Innovator Prize Application Handbook 2020 available on the SFI Plastics Challenge website, which provides important information for applicants such as programme structure and objectives, eligibility criteria, application procedure and evaluation criteria.

Challenge Theme

Plastics have huge positive impacts on our lives by reducing food waste, providing a reliable and secure supply of the goods we consume, making our homes more efficient, and providing affordable and safe medical care. Their ubiquity, however, is having a detrimental impact on the world in which we live through enduring pollution of our lands, waters and food supplies, through their unknown health impacts, and through significant emissions associated with their production and disposal.

The **SFI Plastics Challenge** seeks innovative STEM-led solutions¹ that will enable the sustainable use of plastics in a circular economy; that will restore and preserve our oceans' health; and that will maximise how we use the Earth's finite resources. It is proposed to incentivize outcomes in three specific areas:

- **Remove:** address challenges associated with removing polluting plastics from value chains, from waste streams or from the environment.
- **Replace:** address challenges associated with making plastic usage sustainable, such as identifying biobased or gaseous feedstocks (raw materials), or developing novel materials with desirable functional and end-of-life properties.
- **Recover:** address challenges associated with recovering value from end-of-life plastics, such as depolymerization to regenerate feedstocks, upcycling waste to higher value products or innovations to transform current recycling processes.

Acknowledging the impact associated with the use of plastics in the execution of SFI's funded research, the development of solutions that directly address the challenges of removing, replacing or recycling plastics in Ireland's research laboratories is encouraged.

¹ Only Science, Technology, Engineering and Maths (STEM)-led applications are eligible to be submitted under this call, i.e., applications in which the primary innovation is in an area of STEM. While the involvement of applicants from the behavioural/social/economic sciences is encouraged, particularly in informing the adoption and impact of novel interventions, it is expected that one of the applicants leading the proposal will have a demonstrable track record in the relevant STEM area.