Teams funded in the first round of calls for the National Challenge Fund (listed alphabetically by lead researcher's surname)

Challenge – 2050 Challenge

Team lead	Research body	Team co-lead	Co-lead research body	Project
Dr Mohammad Ali	Trinity College Dublin	Prof. Laurence Gill	Trinity College Dublin	Methane Biofilter – biofiltration of methane generated from on-site wastewater treatment systems
Dr Subhash Chandra	Trinity College Dublin	Dr Liwen Xiao	Trinity College Dublin	Lumiscarb – decarbonising energy systems and the atmosphere by capturing CO2 and converting it into sustainable biofuels using solar energy.
Dr Julie Clarke	Trinity College Dublin	Dr Paul Nolan	University of Galway	Developing a climate risk index for buildings over time to allow for adaptation measures.
Dr Thomas Hooper	University College Dublin	Dr Ioscani Jimenez de Val	University College Dublin	Fluorocapture – reducing fluorinated gas emission by converting fluorinated gases to chemical building blocks for industry
Prof. Aonghus McNabola	Trinity College Dublin	Prof. Mary Kelly Quinn	University College Dublin	SubScrewHydro - , low-cost fish-friendly micro hydropower energy storage
Dr Séamus O'Shaughnessy	Trinity College Dublin	Dr Daniel Trimble	Trinity College Dublin	DRIVE – improving thermal management of batteries in electric vehicles
Dr Andrew Phillips	University College Dublin	Dr James Carton	Dublin City University	RSER – renewable energy storage for mobile applications
Dr Mary Pryce	Dublin City University	Dr Robert O'Connor	Dublin City University	H2Glas – developing more sustainable approaches to green hydrogen production
Dr Charles Stuart	Trinity College Dublin	Dr Sinead Roden	Trinity College Dublin	Mapping the way for decarbonising aviation in Ireland.

Challenge – Future Digital

Team lead	Research body	Team co-lead	Co-lead research body	Project
Dr Alessio Benavoli	Trinity College Dublin	Prof. Rocco Lupoi	Trinity College Dublin	HLOOP – artificial intelligence for process optimisation in manufacturing
Dr Oisín Boydell	University College Dublin	Dr Eoghan Holohan	University College Dublin	AI2Peat – combining artificial and human intelligence for peatland monitoring
Dr Patrick Collins	University of Galway	Prof. Ulf Strohmayer	University of Galway	Cathair Shamhlú – reconnecting urban communities
Dr Andrew Daly	University of Galway	Dr Karl Mason	University of Galway	aiPRINT – using computer vision to monitor and improve 3-D printing processes.
Dr Cailbhe Doherty	University College Dublin	Dr Rob Argent	RCSI University of Medicine and Health Science	Cerberus – acting as a watchdog for consumers of wearable devices for health and fitness

Dr Ray Griffin	South East Technological University	Dr PJ White	South East Technological University	PEStech – personalised labour market data for unemployed people and public employment services
Dr Ibrahim Khalil	University College Dublin	Dr Anca Delia Jurcut	University College Dublin	HOLOS-IE – digital tool to assess Irish agricultural land use and management to reduce pollution
Dr Zili Li	University College Cork	Dr Andrea Visentin	University College Cork	RoadPhone – developing datasets for road pavement quality assessment for maintenance and risk mitigation
Dr Philip Long	Atlantic Technological University	Dr Maria Chiara Leva	TU Dublin	ROBOMATE – a collaborative robotic system for manufacturing tasks
Prof. Eleni Mangina	University College Dublin	Dr Abraham Campbell	University College Dublin	STROHAB – using extended reality and artificial intelligence to allow for tele-rehabilitation for stroke patients
Dr Di Nguyen	University College Dublin	Dr Vincent Hargaden	University College Dublin	ReApt – improving the accuracy of real-time public transport information to support passengers and those allocating resources in the system
Prof. Vikram Pakrashi	University College Dublin	Dr Michelle Carey	University College Dublin	TRaIn – sensors to allow trains in motion to inspect the tracks they run on for signs of degradation
Dr Anup Poudel	University of Galway	Dr Manus Biggs	University of Galway	ST-MED – using machine learning to for renal denervation as a promising way of reducing the incidence and severity of cardiovascular diseases
Dr Stephen Redmond	University College Dublin	Dr David McKeown	University College Dublin	Light Touch Robotics – developing a sense of touch for robotic grippers to enable them to do more tasks in industry
Dr Bharat Bhushan Tripathi	University of Galway	Prof. Michael Gilchrist	University College Dublin	Digibrain – using machine learning to develop a model for predicting brain deformation in concussion
Dr Qian Xiao	Adapt Centre	Dr Kevin Credit	Maynooth University	LuminLab – a case study of Dublin to examine how urban buildings can be decarbonised
Dr Nan Zhang	University College Dublin	Prof. Wenxin Wang	University College Dublin	AI-Form – using artificial intelligence to accelerate nanomedicine development