

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

Challenge – A Healthy Environment for All

Team lead	Research body	Team co-lead	Co-lead research body	Project
Dr Mohammad Ali	Trinity College Dublin	Dr Mohammad Reza Ghaani	Trinity College Dublin	Nano-AGS: Efficient and sustainable wastewater treatment using nanobubble-assisted aerobic granular sludge (AGS) process
Prof. Jeremy Auerbach	University College Dublin	Dr Suzanne Linnane	Dundalk Institute of Technology	Unleashing Water: Community science and environmental justice for health Irish homes
Dr Ruairí Brannigan	Dublin City University	Dr Eadaoin Carthy	Dublin City University	Revolutionizing Water Purification: An innovative filtration-based approach for the effective elimination of per- and polyfluoroalkyl substances (PFAS)
Dr Ciprian Briciu-Burgina	Dublin City University	Prof. Fiona Regan	Dublin City University	RESTART (Rapid bactERial Sensing for a healthY wATER environment)
Dr Marica Cassarino	University College Cork	Dr Dean Venables	University College Cork	BEHAViour and Impacts on AIR quality: Combining forecasting with co-created targeted messages to reduce polluting behaviours (BEHAV-I-AIR)
Dr Yuanyuan Chen	Technological University of the Shannon	Prof. Maurice Collins	University of Limerick	Traceless: Developing fully biodegradable tree-supporting products with controlled release of fertilizers and pesticides to avoid microplastic and chemical pollution
Dr Deirdre Fitzgerald-Hughes	RCSI University of Medicine and Health Sciences	Dr Mary Pryce	Dublin City University	NoHoW-AMR – New OneHealth OneWater Antimicrobial Resistance Solutions
Prof. Cormac Murphy	University College Dublin	Prof. Cormac Murphy	University College Dublin	A sustainable solution for the disposal of PFAS-containing aqueous film forming foams (AFFF)
Dr David O'Connor	Dublin City University	Dr Jiayao Chen	University College Dublin	Biological and chemical aerosol monitoring and modelling (BOHEMIAN)
Dr Jimmy O'Keeffe	Dublin City University	Dr Jolanta Burke	RCSI University of Medicine and Health Sciences	VNiC-Health (Valuing Natural Capital in Communities for Health)
Dr Srikanta Sannigrahi	University College Dublin	Dr Anh Vu Vo	University College Dublin	An INTEgrated street tree VALuation-based solution for minimizing the uneven street tree distribution in cities (INTERVAL)

Challenge - Digital for Resilience

Team lead	Research body	Team co-lead	Co-lead research body	Project
Dr Salem Gharbia	Atlantic Technological University	Dr Iulia Anton	Atlantic Technological University	Digital tool technology for smart farming: improving sustainability and reducing carbon footprint in the Irish horticulture and tillage sector
Dr Vincent Hargaden	University College Dublin	Dr Sean McGarraghy	University College Dublin	Resilience to Address Medicine Shortages for Patients (ReAMPS)
Dr Meghana Kshirsagar	University of Limerick	Dr Alison O'Connor	University of Limerick	Unleashing the Power of AI and Digital Twins in Emergency Care: A vision for the future (ALTER)
Dr Ruth Levey	University of Galway	Dr Ruth Tarpey	University of Galway	ambiCART, a disruptive digital technology to track live cells and monitor their viability in real time as they are shipped ambiently
Dr John MacSharry	University College Cork	Prof. Ciara Heavin	University College Cork	UniHealth – Digital technologies to allow real-time diagnosis, detection and reporting of infections on University campus
Dr Sarbast Moslem	University College Dublin	Dr Pavlos Tafidis	University College Dublin	Digital Voting Hub for Sustainable Urban Transport System
Dr Hazel Murray	Munster Technological University	Gillian O'Carroll	Munster Technological University	Digital Resilience for SMEs
Dr Indiana Olbert	University of Galway	Dr Thomas McDermott	University of Galway	Novel approaches for forecasting multi-hazard hydrological events (StopFloods4.ie)
Prof. Donna O'Shea	Munster Technological University	Prof. Thomas Newe	University of Limerick	Cyber Shock – Building Ireland's Cyber Resilience against Cyber Attacks
Dr Cemalettin Ozturk	Munster Technological University	Prof. Barry O'Sullivan	University College Cork	Deep Learning based Transferrable Supply Chain Stress Test
Prof. Mark Roantree	Dublin City University	Prof. Patricia Kearney	University College Cork	RECONNECT: Chronic disease discovery, analysis and predictive modelling
Dr Rui Teixeira	University College Dublin	Dr Beatriz Martinez-Pastor	University College Dublin	CAPABLE – Creating a digitAI Platform to Assess community capability Based resilience

Challenge – Energy Innovation

Team lead	Research body	Team co-lead	Co-lead research body	Project
Prof. Dermot Brabazon	Dublin City University	Dr Corné Mulwijk	Dublin City University	Enhanced Photocatalytic Electrochemical Cells (PEC) for Green Hydrogen Production: surfaces to break the cost and production yield barriers of PEC
Prof. Alojz Ivankovic	University College Dublin	Dr Luke Kelleher	University College Dublin	Aerodynamic Design and CFD analysis of drag reducing appendable devices for large ground vehicles
Dr Vesna Jaksic	Munster Technological University	Dr Paul Leahy	University College Cork	National REpositoRy of Decommissioned Wind Turbine BLADEs (EirBLADE)
Dr Tony Keene	University College Dublin	Prof. Kevin McDonnell	University College Dublin	BioCarbon – Turning Waste into Energy Storage
Dr Dmitry Kozlov	Tyndall National Institute	Dr Senad Bulja	Tyndall National Institute	RENAISSANCE: Wireless charging and powering of spatially spread IoT devices using magnetic fields
Dr Fergal O'Rourke	Dundalk Institute of Technology	Dr Peter Ryan	Dundalk Institute of Technology	Floating Offshore Measurement Platform
Prof. Fabiano Pallonetto	Maynooth University	Dr Amy Fahy	Maynooth University	RENEW – Renewable energy through networking, education, and building a strong community will for sustainability
Dr Kunwar Paritosh	University College Cork	Dr Archishman Bose	University College Cork	Engineered organic carbon-based functional materials for energy and water (EMERGE)
Dr Sithara Pavithran	Dublin City University	Prof Valeria Nicolosi	Trinity College Dublin	Advanced perovskite solar cells for mass-scale sustainable production (SmarTSolaR)
Prof. Igor Shvets	Trinity College Dublin	Dr Sarah McCormack	Trinity College Dublin	Smart Materials for Energy Efficient Windows
Dr James Sweeney	University of Limerick	Prof. Vikram Pakrashi	University College Dublin	Real-time prediction of GREEN electricity generation potential from renewables for optimized GRID management (GREEN-GRID)
Dr Matthias Vandichel	University of Limerick	Prof. Vivek Ranade	University of Limerick	GEOHERMAL: Sustainable Geothermal Energy as zero-fuel alternative for heat pumping, storage and power generation
Prof. Dominic Zerulla	University College Dublin	Dr Silas O'Toole	University College Dublin	Dynamic, sustainable glazing technology enabling modulation of solar heat flow, significantly reducing carbon emissions from the built environment

Challenge – OurTech

Team lead	Research body	Team co-lead	Co-lead research body	Project
Dr Chiara Cocco	University College Dublin	Dr Gabriela Martinez Sainz	University College Dublin	CRAFT-MY-STREET – Capacity building of local government for youth engagement in decision-making through geospatial data in Minecraft
Dr Philip Crowe	University College Dublin	Dr Gavin McArdle	University College Dublin	Vacancy Map Ireland (VMI): Development of an open geospatial data model for vacancy using proxy datasets, GIS and AI
Dr Hannah Goss	Dublin City University	Prof. Alan Smeaton	Dublin City University	Photovoice+ - mapping the health environments of young people
Dr Susan Leavy	University College Dublin	Dr Ruihai Dong	University College Dublin	ART: Assessing recommendations for trustworthy AI
Dr Keith Maycock	National College of Ireland	Dr Yvonne Lynch	Trinity College Dublin	Project Lily: Enhancing speech language therapy supports for children
Dr Hazel Murray	Munster Technological University	Aoife Long	Munster Technological University	Cyber safety for vulnerable populations
Dr Dympna O’Sullivan	TU Dublin	Dr Julie Doyle	Dundalk Institute of Technology	CODESIGN – Co-creating DEmentia Support for InteGrated care, a Novel platform approach
Dr Susan Rea	Munster Technological University	Dr Mary Galvin	Munster Technological University	IDEate – Inclusive DEsign for digital public services
Dr Payam Sajadi	University College Dublin	Dr Di Nguyen	University College Dublin	Domestic Gardens Identification and Modification: A nature-based solution for flood risk mitigation
Dr Christina Thorpe	TU Dublin	Dr Matt Bowden	TU Dublin	GroSafe: A technology-enabled solution for building societal resilience against grooming
Dr Ihsan Ullah	University of Galway	Dr Waqar Shahid Qureshi	TU Dublin	Intelligent pavement condition rating systems for cycle routes and greenways (iPSRS)