

Sustainable Development Goals (SDGs) Research

Insight

SFI RESEARCH CENTRE FOR DATA ANALYTICS

A World Leading SFI Research Centre

Science Foundation Ireland For what's next

Establishing Large Scale Wet Farming

PALUdiculture large-Scale DEMOnstrations (Palus Demos) will establish large-scale paludiculture (wet farming) sites to explore innovative agricultural practices that align with EU's Green Deal's goals. It is hoped as a result to inspire agricultural entrepreneurs, biobased manufacturing industry, communities, politicians, and nature organisations to recognise paludiculture as a new direction in climate-smart farming that provides food and other crops whilst preserving peat pastures, storing carbon and reducing greenhouse gas emissions.



Unlocking Health Data for Smarter Decisions

Accessing health data alone is insufficient for driving better decision-making. Data must be made both understandable and actionable. Effective data presentation requires more than just display; it demands a deeper understanding of the end users' digital literacy, information needs, and contextual goals. The **CARA Network** helps GPs translate data into meaningful insights through actionable dashboards, while the **HSE** is standardising data presentation across its departments to enhance clarity and usability.



Virtual Reality in the Classroom

Insight's **Virtual Classroom** introduces the benefits of virtual reality to schools by demonstrating how immersive technologies can bring a whole new exciting dimension and understanding to education by providing avator-based lectures, and using the technology in an array of subjects such as history where students can walk the streets of a medieval city, or move through the depths of an ocean for a geography lesson.



Converting Wastewater into Energy

ResNRJwater focuses on leveraging existing water and wastewater infrastructure to enhance renewable energy production and consumption. By turning these infrastructures into energy hubs, ResNRJwater aims to improve energy resilience, reduce dependence on non-renewable sources, and contribute to grid stability.



Seafood Traceability

Leveraging dataspace for seafood sustainability and traceability in Irish industry aims to empower efficient end-to-end traceability, sustainability, and reliability in the Irish seafood sector. The project focuses on developing novel methods and techniques to utilise real-world dataspace to make collaborative model training entirely distributed and trustworthy for improving the Irish seafood supply chain's traceability, transparency, sustainability, and operational efficiency.



Decarbonisation and digitalisation of Atlantic Ports

Atlantic ports are increasingly becoming high-tech green energy test areas, wanting to provide clean electricity to ships and the companies that use their services, and making use of local resources. **ENEPORIS** aims to demonstrate the essential role of digitalisation on port decarbonization and on efficient consumption of renewable energy.

Intelligent Pavement Condition Rating System for Cycle routes and Greenways

Pav-Analytix is about implementing an intelligent sensing system for cost-effective data collection using advanced sensors mounted on mobile units along greenways, pathways and cycleways to rate surface conditions. It will help in the development or maintenance of new infrastructure to reduce traffic, make routes safer, lower carbon emissions and improve health and wellbeing of communities.



Digital Support Infrastructure for Citizens in the Repair Economy

Waste from electrical and electronic equipment (WEEE) is one of the fastest-growing waste streams in the EU, growing at 3-5% a year. **Sharepair** aims to address the issue by scaling up citizen repair initiatives through the use of digital tools that stimulate and facilitate citizen repair by collecting repair solutions and making them easily accessible to citizens.



Peatland Policy Portal for Ecosystem Restoration and Carbon Sequestration

While healthy peatlands are the largest natural terrestrial carbon store, in their damaged state they are a major source of greenhouse gas emissions. To aid in transforming degraded European peatlands from sites of carbon emissions to those of carbon sequestration, **Multi-Peat** is developing a peatland policy portal to help overcome limitations in existing peatland-related policies.



Marine Planner Tool

Human activities and climate change are harming ecosystems, reducing biodiversity, and putting essential resources at risk. **BioProtect** aims to help tackle these challenges with an area-based management decision-support tool (ABM-DSF). This innovative approach will bring together local communities, map human impacts, and highlight key areas in need of protection and restoration.



Monitoring & Improving Air Quality

Insight is part of a cross-sectoral partnership project led by Galway City Council known as **The Air We Share** which combines data science, art, community education and citizen action. It will use seven monitors to record air pollution in the city's decarbonising zone with the data being made available to the local community to 'make the invisible visible'.



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