

Annex A: Essential Tasks – Suggested Problem Statements and Datasets

The AI Challenge will provide problem statements aligned with Ireland’s National AI Strategy across the following domains: Agriculture, Healthcare, Housing, Justice & Public Safety, Economy & Finance, and Environment. Participants are encouraged to leverage datasets from sources such as data.gov.ie, CSO, Teagasc, and the European Data Portal

Domain	Dataset Sources	Potential Topics
Agriculture	data.gov.ie, CSO, EPA, SEAI, Teagasc	Crop disease management, pest control, soil health monitoring, weather forecasting, irrigation optimisation, supply chain management, market analysis, regulatory compliance
Health	HSE, CSO, World Bank Open Data	Disease prevention, patient management, telemedicine, health data analysis, mental health support, drug development, healthcare administration, patient education
Housing	housingagency.ie, CSO	Affordable housing, construction efficiency, urban planning, energy efficiency in housing, smart housing solutions, homelessness prevention, community engagement
Population and Society	data.gov.ie, CSO, Irish Legal Information Initiative (IRLII)	Education enhancement, employment support, public safety, social services optimisation, cultural preservation, policy analysis, disaster preparedness
Science and Technology	European Data Portal, data.europa.eu, World Bank Open Data	R&D support, innovation acceleration, STEM education, data analysis, collaboration and networking, public engagement in science, ethical considerations in technology
Transport	Transport Infrastructure Ireland (TII), CSO, Eurostat	Traffic management, public transport optimisation, road safety improvement, autonomous vehicle integration, sustainable transport solutions, emergency response coordination
Justice and Safety	Irish Legal Information Initiative (IRLII), CSO	Crime prevention, legal document automation, access to legal services, cybersecurity enhancement, public safety awareness, fraud detection, judicial decision support
Economy and Finance	data.worldbank.org, CSO, Tech Ireland	Economic forecasting, financial literacy, investment optimisation, fraud prevention, small business support, tax compliance, public budgeting, employment forecasting
Education and Sport	Irish Sports Council, CSO	Personalised learning, teacher support, sports participation, talent identification, student mental health, research and innovation in education
Energy	SEAI, CSO	Renewable energy integration, energy efficiency, smart grid management, consumer energy management, energy policy development, infrastructure planning
Environment	EPA, CSO	Pollution control, biodiversity conservation, climate change mitigation, sustainable agriculture, waste management, ecosystem restoration, water resource management