RDA Ireland SPOTLIGHT: WATERFORD INSTITUTE OF TECHNOLOGY

RESEARCH DATA ALLIANCE EUROPE
IE NATIONAL NODE

"At Waterford Institute of Technology, our focus is on forming responsible global citizens, creating new knowledge and actively leading social and economic development. We see open innovation and open science as being integral to this mission."

Waterford Institute *of* Technology
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

Interview with: **DAVID KANE**
Head of Systems and Electronic Resources

Commitment to good research data management and Open Science

Open Science is teamwork. In a healthy and efficient research culture, everyone feels that their contribution is valued. A key benefit of Open Science is the expanded notion of research assessment that goes beyond the traditional measures of citations, and funding or supervision track records. Data management, software development, science communication, and editorial work, etc., have not been sufficiently acknowledged in the past. For example, in WIT research software has proved to be a more significant output than publications for some European-funded projects.

Open Science is a cultural change, made possible by technology. Openness of both published research and the underlying data is set to lead to a revolution in technology-enhanced research communication that could not be possible with the current paywall model. Through the use of AI, big data, and machine-learning we will see a quantum jump in research efficiency and effectiveness at all points in the scholarly communication cycle. For example, with improvements in natural language processing, it is now possible to extract and index concepts from a corpus of scientific literature to aid search, review, and even to identify gaps in the literature.

Open Science is Citizen Science. Open data and interoperability enable the citizen to engage with the scholarly communications cycle at any point, and at an appropriate level. I look forward to seeing many examples of this as the European Open Science Cloud infrastructure develops. Involving the citizen in science will enhance society's appreciation of science as a driver of positive societal change.

Open Science informs policy. The best policies are informed by facts, not ideologies. Locking science behind paywalls in the digital age has held society back, just at a time when the crises we all face have never been greater.

Focusing on Open Science policy and infrastructure

At WIT, we are focusing on policy and on infrastructure. We launched our Open Science policy in October. The policy mandates green open access and encourages the use of persistent, resolving, identifiers, specifically the DOI and ORCID. We are integrating the use of DOI and ORCID into our repository infrastructure and research information workflows. We hope that by doing this, we will make it very easy for researchers to comply. We expect that access to the higher tier of the ORCID API, which we have as a member of the national ORCID consortium, will help us do this.

Currently, we recommend researchers deposit their data on Zenodo and/or a discipline-specific data repository, of which there are many. We are looking at hosting our own institutional data portal. Such a portal will serve to unify our research data collection and demonstrate the value that we place on open research data.

The Challenge

It has always been challenging to get people to deposit their articles in the repository. What has changed is that there has been an increase in awareness of Open Science in general over the last 20 years. It has become easier now to persuade people of the value of openness in research. I attribute this recent rise in interest to Plan S, and the recommendations of the *National Framework on the Transition to an Open Research Environment*. Academics who publish 'self-tasked' research that is not funded remain harder to reach. These researchers tend to be in the humanities and social science areas.

Sharing lessons learnt

In 2007, I set up the first OA repository in the IoT sector here in WIT using Southampton University's ePrints platform. Building a repository like this, and then preaching to the uninitiated, like John the Baptist, will get you a few loyal converts, but you will be a long time in the desert. Just as Open Science itself is a team effort, changing the organisational culture is a shared endeavour. It is important, therefore, to discuss Open Science with different institutional stakeholders and to develop a coordinated approach, which is underpinned by a written policy that aligns with institutional strategy. Someone starting this journey today will find openness an easier sell.

Contributing to the open research environment in Ireland and Europe

WIT has long participated in the national discussion on Open Access/Open Research. I represented the Institute on the National Steering Committee for Open Access Policy, which later became NORF, and contributed to the development of the recent National Framework. I strongly believe that academic libraries will play a role in research data management. To this end, I have become involved in the Carpentries movement, whose aim is to 'build global capacity in essential data and computational skills for conducting efficient, open, and reproducible research'. Through the HEANet's Library Group, LIR, we have run and taught several Library Carpentry training sessions on things like data hygiene, SQL, and the UNIX command line as well as workshops on Open Data, and security. We have also trained up 6 Irish carpentries instructors, making this project much more sustainable here in Ireland. By giving staff an appreciation of and confidence in concrete foundational IT skills, we have contributed to building RDM capacity.

WIT President, Professor Willie Donnelly, is a member of the European Research, Innovation, and Science Policy Experts (RISE) high-level group, which provides direct strategic support to the European Commissioner for research, innovation, and science. The work of this 15-member group is directly responsible for informing the new mission-oriented innovation approach that distinguishes Horizon Europe research funding programme and its three pillars: Open Science, Open Innovation, and Global Challenges and Industrial Competitiveness.

The RISE Report – *Europe´s Future: Open Innovation, Open Science, Open to the World* – emphasises the importance of Open Science to innovative, sustainable, and socially inclusive economic development.