Repositories transforming scholarly communication: an *Insights* special collection

Digital repositories continue to evolve and revolutionize the way research is conducted and shared. *Insights* has published on the subject of repositories for over a decade, and the articles included in this special collection are still relevant today – highlighting repository interoperability, impact metrics, open access and digital preservation policies as well as research on the university and library as publishers.

Keywords

digital repositories; interoperability; open access policies and mandates; digital preservation

Digital repositories emerged in the 1980s to store and share research articles. In the early 2000s, the open access movement led to the creation of more digital repositories, including institutional repositories that allowed universities to share their research output with the public. The Open Archives Initiative (OAI)[1] was established in 2002 to develop and promote interoperability standards for digital repositories. Digital repositories have expanded beyond institutional repositories to include disciplinary repositories focused on specific fields of research. Examples include arXiv for physics and mathematics and PubMed Central for biomedical research. Digital repositories continue to evolve and revolutionize the way research is conducted and shared. The 19th International Conference on Open Repositories (OR2024) is a demonstration of this as it centres on the theme 'Empowering Global Progress',[2] emphasizing how repositories facilitate research transparency, amplify under-represented voices, enhance data equity worldwide and contribute to sustainable development goals. Similarly, the 2024 International Open Access Week maintains focus on 'Community over Commercialization',[3] spotlighting community-led infrastructures such as preprint servers, repositories and open publishing platforms that serve both research and public interests. Being mission-driven and not profit-driven, repositories evolve according to community needs. Most repositories are open public infrastructures and the Global Sustainability Coalition for Open Science Services (SCOSS) underscores four compelling reasons for supporting open infrastructures in scholarly communication, see Figure 1.

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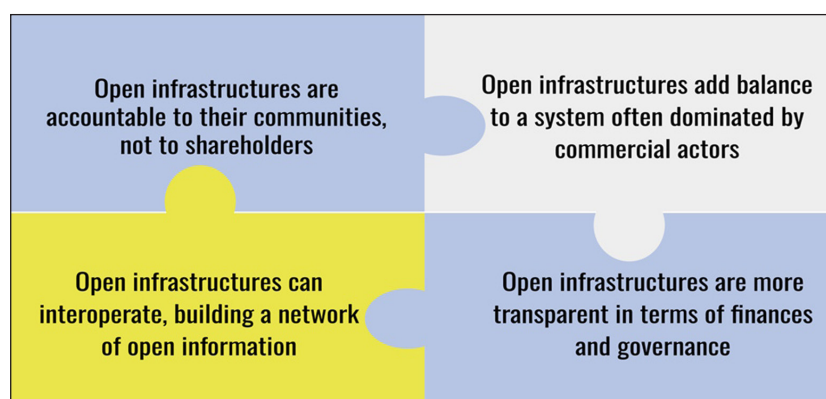IRYNA KUCHMA

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Figure 1. The importance of supporting open infrastructures for scholarly communications (SCOSS, 'Why support open infrastructures?'[4])

Insights has published on the subject of repositories for over a decade and the articles included in this special collection are still relevant today. In the first article, Reiger[5] underscored a great potential for subject and institutional repositories to function in a complementary fashion by leveraging their particular strengths and suggested a co-operative framework for an expandable infrastructure, emphasizing the significance of interoperability and common standards to enable effective communication and sharing among various repositories.

The importance and value of repositories had been demonstrated with the IRUS-UK[6] comprehensive model and a national service for standardized recording and reporting of the usage statistics of every item hosted by repositories. Many institutions and repository platforms have today implemented improved reporting mechanisms and analytics tools to provide more accurate and detailed usage statistics as demonstrated by IRUS-UK, OpenAIRE Usage Statistics Service, Crossref Event Data service and COAR's Next Generation Repository Working Group.[7] Additionally Boulton,[8] proposes the measurement of the societal impact and community reach impact of institutional repositories alongside performance metrics through the use of social media metrics. A case study is provided by Tattersall et al.[9] investigating how much of the research published by their universities is cited in Wikipedia and what proportion of those citations are linked to an open access version.

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More themes have been explored in the journal, with a number of authors focusing on open access within repositories. One of these is a retrospective analysis of the open access movement in the UK from a library standpoint, with the vision of open access regaining the spotlight as the virtuous and ethical way to publish scholarly outputs, linking repository holdings together into an aggregation and academy seeking to regain control of scholarly publishing.[10] As demonstrated by Steele,[11] sustained institutional leadership is essential for the successful deposit of academic content in an institutional repository together with innovative publishing strategies to maximize research dissemination and societal benefits. The open access policies and mandates theme continues with Harnad[12] noting that green open access mandates do have a major effect, and the stronger the mandate, the stronger the effect – building on the fact that despite open access benefits, most researchers do not make their articles open access unless their institutions and/or their funders mandate this. Articles published on this theme acknowledge the role of the library community standing at the forefront of promoting open access and decry the limitations of existing policies and mandates, with Zhang[13] exhorting national efforts to promote open access to publicly funded research. He also notes that these efforts are hampered by a need for more concrete mandates and effective implementation strategies to address challenges like predatory journals and financial transparency. As institutional repositories have a leading role in providing long-term access to the research output of universities, one of the studies in our collection[14] assessed the capabilities of institutional repositories to support long-term preservation of digital content by reviewing digital preservation policies and plans and offering recommendations.

'sustained institutional leadership is essential for the successful deposit of academic content in an institutional repository'

Research on the university as a publisher was explored, with Leão[15] expounding on the role of institutional repositories in maximizing the external impact of institutions and expressing the hope that institutional repositories and academic publishers would be called on to work more collaboratively. The growing involvement of libraries in providing publishing services via institutional repositories for gray literature, for example technical reports, conference proceedings and journals, was described by Watkinson[16] as alleviating challenges in discoverability and preservation and providing opportunities for collaboration between libraries and university presses to enhance scholarly communication and impact. The collection examines the role of the library as a publisher and continues with Ma, Buggle and O'Neill[17] asserting that the gold open access model is destructive to the knowledge

production ecosystem, fails to entice many researchers and sidelines diverse voices and experimental ideas. They also suggest that library publishing via green open access with no embargo period, especially with the facilitation of institutional repositories, can support bibliodiversity and contribute to sustainable and equitable knowledge production and scholarly communication as scholar-led publications tend to allow for experimental ideas and marginalized voices.

Research on repositories is diverse and will continue to focus on its many different aspects, including interoperability, policies and mandates, collaborations – as well as long term access and sustainability.

Abbreviations and Acronyms

A list of the abbreviations and acronyms used in this and other *Insight*s articles can be accessed here – click on the URL below and then select the 'full list of industry A&As' link: **http://www.uksg.org/publications#aa**.

Competing interests
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