

Topics

This paper and suggested presentation is a case study covering lessons learned and potential best-practices seen to emerging trends for international collaboration in the CRIS domain, in particular with a focus on:

- The significance of CRISs for the promotion and realisation of FAIR and Open Science
- The use of Artificial Intelligence (AI) in research information management
- The role of CRIS in support of Plan S and transforming scholarly communications

Title

Lessons Learned in the UK from Navigating the FAIR Open Science World: A Collaborative Approach Leveraging the CRIS for Transforming Scholarly Communications

Abstract

As we have embarked on the dynamic journey of Open Science, the traditional norms of accessing, publishing, and managing research results are undergoing a radical transformation¹, presenting challenges for researchers in the evolving ecosystem.

At UK research libraries, a daily struggle unfolds as researchers grapple with questions like, "What do I need to do with my research data?", "What's a CC-BY license?", and "How can I pay for publishing my latest article?"

As advocates of Open Science, we recognize the need for a comprehensive solution to manage the diverse spectrum of research outputs. This solution must seamlessly weave through researchers' workflows, lifting the burden from library and research administrators drowning in a sea of Excel spreadsheets and email correspondence. It must also confront the formidable challenge of managing Open Access expenditure alongside subscriptions.

Initially turning to Current Research Information Systems (CRIS) as a potential savior, we found them not sufficiently adopted by our researchers. The outdated user experience and extensive manual work required from faculty and administrators posed challenges. Moreover, the CRIS did not address the explicit Open Access and Open Science challenges, including managing Article

¹ Universities UK. 2017. 'Monitoring the Transition to Open Access: December 2017'.
<https://www.universitiesuk.ac.uk/what-we-do/policy-and-research/publications/monitoring-transition-open-access>

Processing Charges (APCs), OA agreements, deposits of research datasets, or compliance with funding policies like Plan S².

To tackle these evolving challenges, we adopted a collaborative strategy, uniting forces within the university and forging alliances with international partners to construct a sustainable infrastructure. This collaborative effort builds bridges across diverse stakeholders, integrating systems and workflows while embracing the FAIR (Findable, Accessible, Identifiable and Reusable) principles as the bedrock for automation. Our case study highlights connecting our CRIS (Pure) with ChronosHub³ as a layer on top of our internal and external systems at Lancaster University.

Our approach is based on keeping the CRIS as a fundamental core system with retained support for the current business-critical use cases, including the Research Excellence Framework (REF). To address the specific challenges with Open Access and Open Science, we establish a bi-directional integration between our CRIS and ChronosHub, which is a dedicated platform for Open Access management.

In this way, we reuse the well-structured data on our researchers, their affiliations and grants from the CRIS in ChronosHub. Upon article acceptance, our researchers get through ChronosHub a low touch and much more automated way to submit their research results than in the CRIS as ChronosHub combines data reuse from several connected systems with AI scanning of manuscripts and APC invoices. The researchers do not even need to log in, as ChronosHub provides a dynamic form that authenticates the users based on their email address, and the forms get populated automatically through the AI document scanning, minimizing the manual work for the authors to only validate the information that now has been structured in line with the FAIR⁴ principles.

Through integrations with Pure, DOAJ, Sherpa, Plan S Journal Checker Tool, OpenAlex, DataCite, OA Switchboard, and more, ChronosHub automatically enriches the records once the research output has been published, and ensures that it ends up where it needs to be, whether that is on an APC approval dashboard, in an OA agreement report or the full-text automatically being deposited into Pure.

This collective endeavor has made remarkable progress in efficiently managing APC expenditure, ensuring real-time monitoring of OA agreements, automating repository deposits, and unburdening the researchers through a seamless end-

² Johnson, Rob. 2019. 'From Coalition to Commons: Plan S and the Future of Scholarly Communication'. *Insights* 32 (1): 5. <https://doi.org/10.1629/uksg.453>.

³ Beard, Romy. 2022. 'The Luxembourg National Research Fund and ChronosHub: Lessons learned from implementing an Open Access Management platform'. *Procedia Computer Science*, vol. 211, pp. 93-100, ISSN 1877-0509. <https://doi.org/10.1016/j.procs.2022.10.180>.

⁴ Chen, X. (2022) 'Implementing FAIR Workflows along the research lifecycle', *Procedia Computer Science*, vol. 211, pp 83-92, ISSN 1877-0509, <https://doi.org/10.1016/j.procs.2022.10.179>.

to-end publishing journey where they no longer need to worry about non-compliance, payments of OA fees, reporting and manual administrative work.

In this presentation, we will share not just triumphs but valuable learnings and identified best practices, especially on how to effectively leverage the CRIS to serve the needs from a broader Open Science perspective. We'll illuminate the path we've treaded, shedding light on remaining challenges and proposing community actions. Through collaborative efforts, we aim to overcome systemic issues in the ever-evolving realm of Open Science. This is further an invitation to join in on this journey, for together, we can chart the course for a more enlightened and interconnected research future.