

Diamond in the Rough: Interoperability of CRIS and Open Access Workflows

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1 Introduction and Context

In the wake of the Open Access transformation, Current Research Information Systems (CRIS) have, in many cases, adopted a new role, evolving from administrative, evaluation-led databases into central hubs for Open Science workflows. While literature has extensively explored the merging of repositories and CRIS (De Castro et al., 2014; Schöpfel & Azeroual, 2021; Schöpfel et al., 2024), the practice at the University of Vienna suggests that a loose, interoperability-first approach is often more effective than fully merging systems. This approach involves u:cris, the Current Research Information System of the University of Vienna, and u:scholar, the university's institutional repository for scholarly outputs. As De Castro emphasises, CRIS functionalities must continuously expand to meet complex requirements in Open Access workflows (De Castro, 2024).

2 Strategic Scope: Specialised Systems and Mutual Enrichment

This paper analyses the University of Vienna's strategic approach of maintaining specialised, independent systems while facilitating mutual enrichment through robust interoperability:

2.1 Transitioning OA Monitoring: From Journal-Level Indicators to API-Driven Data

The current implementation of Open Access reporting from the CRIS, which originated around 2013, relies heavily on the Directory of Open Access Journals (DOAJ) attribute and has faced limitations regarding transformative agreements. At the time of its inception, this approach was considered state-of-the-art, as the DOAJ represented the only reliable data source for identifying Open Access publications.

Due to the strategic dominance of transformative agreements in Austria, a significant and growing portion of the University's output is now published in hybrid journals. The traditional reporting logic now fails to capture a substantial share of the institution's actual OA performance. To address this, we argue for a transition towards API-driven metadata enrichment using data aggregators such as OpenAlex, Dimensions, or the National Austrian Open Access Datahub.

2.2 CRIS-IR Interoperability: Facilitating Metadata-Led Archiving

Unlike integrations between CRIS and IR, in which the CRIS is used to ingest full-text objects for the IR, we opted to focus on interoperability rather than full integration of workflows. Our CRIS (u:cris) aims to only collect metadata for publications, while our institutional repository (u:scholar) facilitates the archiving of these scholarly outputs. The main obstacle to using an integrated process or a merged system for archiving lies in the need for editorial processes to ensure the legality of uploads and the dissemination of full-texts via the IR.

In this instance, there is a clash of priorities:

- CRIS: Focuses on the timeliness of dissemination of information (public showcase).
- IR: Focuses on the reliability of long-term archiving.

Considering the volume of records (~10,000) added to u:cris each year, a user-based ingest of full-texts would dwarf our editorial capacity. Maintaining an integrated process through several systems of different scopes takes exceptional effort to preserve the integrity of workflows. Using specialised but interoperable systems eases software development, especially regarding the optimisation of the system for specific user requirements.

The current workflow is based on the Pure API. Based on journal lists (previously using GOLD OA ISSN provided by University of Bielefeld ([10.4119/unibi/2961544](https://doi.org/10.4119/unibi/2961544)); now DOAJ) article records are marked in u:cris as possible ingest candidates for u:scholar. u:scholar then retrieves these records, which allows the Open Access Office (OAO) to upload the full-text document to the IR. In this process the DOI is used to import metadata from Crossref — which can be merged with metadata from u:cris — as well as retrieve the full-text from the publisher's website or repository. After rights and licence checks of the full-text the upload in u:scholar is finalised, and the Pure API is used to enrich the record in u:cris with the IR handle and licence information.

2.3 Integrating Administrative OA Funding Data as a CRIS Reference Source

Transformative publishing agreements still play a major role in Austria's Open Access Strategy. The University of Vienna currently holds such agreements with 28 publishers (<https://openaccess.univie.ac.at/en/funding/oa-publishing-agreements/>) as a participant in the Austrian Academic Library Consortium (Kooperation E-Medien Österreich – KEMÖ). Additionally, there are OA funds from both the university and the Austrian Science Fund (FWF) covering publications in OA journals not part of a publisher's agreement.

Eligibility checks are a major component when administering these funds and agreements. This is one of the main tasks of the Open Access Office (OAO). The criteria for eligibility are rather strict: on top of journal-based criteria regarding coverage by an agreement or presence in DOAJ and the use of a CC licence, the corresponding author must have a current affiliation with the University of Vienna, with only very short grace periods after leaving the university. This is in contrast to u:cris, which aims to present a researcher's affiliation not in a "bureaucratically exact" sense; for example, by offering researchers longer grace periods to display their profiles in the u:cris Portal.

As the OA publications funded by the Open Access Office (OAO) are a very selective subset of research output, this offers an opportunity to use this curated data of the funding process as a reference for coverage in the CRIS.

2.4 Representing Diamond OA: Formalising Editorial Labour as CRIS Activities

Diamond OA refers to publications for which neither readers nor authors are inflicted costs. (DIAMAS, 2024) One of the biggest hindrances for Open Access publishing in general also exists specifically for Diamond OA: for research assessment, the high impact of publications and corresponding metrics are still often considered the most important indicators. At the same time, Diamond Open Access heavily relies on the enthusiasm, energy and attention of researchers "owning" their publication venues. (European University Association, 2024; Taubert, 2025)

A CRIS now offers the opportunity to aggregate this information in a meaningful way: not only does the modelling of activities in a CERIF-compliant CRIS allow the dissemination of standardised and normalised data, but it must also be considered an important step for changing research assessment practices (e.g. CoARA). Our thesis is that maintaining activity records for University of Vienna editors in u:cris is not only a viable service but also extremely important for highlighting the effort put into scholar-led publishing by researchers.

3 Methodology and Piloting

For the current Intellectual Capital Report due in March 2026, we performed a pilot run with funding data from 2025. The first results are very promising, if a bit disheartening:

Of the approximately 1,700 relevant publications provided via the Open Access Office (OAO) master list, close to 500 were still missing from u:cris in February 2026. This result shows not only the need for this cooperation but also suggests that it should be a continuous process rather than a once-a-year endeavour. We plan for 2026 and 2027 to establish processes in cooperation with our hosted journals to document editorial activities and curate this information in u:cris.

4 Conclusion

The transformation of the "diamond in the rough" requires targeted polishing through automated, interoperable processes rather than rigid system integrations. Using specialised but interoperable systems eases software development and aids optimisation for specific user requirements. Challenges such as data ownership, responsibility for researcher profiles, and balancing support overhead remain part of the organisational terra incognita that must be addressed in future iterations.

5 References

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6 Keywords

CRIS, IR, Open Access Monitoring, Transformative Agreements, Diamond Open Access, CRIS-IR-Interoperability