



BEYOND THE TRADITIONAL CRIS
—
APPROACH & USE CASES



INTRODUCTION



Yann Mahé

- ✓ 15 years in developing innovative solutions to help researchers and their institutions better accessing, analysing and promoting their research activities.
- ✓ Gf2i (French Think Tank for professional information and knowledge): Board member and co-leader of the Open Science Working Group.
- ✓ Regular speaker in international conferences on Open Science, AI, Research metadata – Last conferences: Documentation/i-expo (Paris - March 2023), Biennale du Numérique de l'ENSSIB (Lyon - Dec. 2021), Pomeranian Open Science Conference (Dec 2021)..

LinkedIn profile [here](#).

Make sense of your research data

MSW

MyScienceWork (MSW) is an innovative technology company based in France that provides a **suite of data solutions** for universities, academic libraries, research institutions, publishers, funders....

Polaris OS

Polaris OS is an innovative **open source solution** for data management. In all its different forms, it is used to **store, manage** and **showcase** contextual metadata for research activities. **Polaris OS** manages **entities** such as people, organisations, projects, research outputs, grants, contracts... and all the links between them.

SIRIUS

Sirius is a suite of innovative **data science solutions** that helps scientists and their institutions to **automate tasks** to **map, manage, analyse, and promote** their results to all stakeholders of research.

MyScienceWork & Open Science

MSW

Open Science is at the heart of most of our projects. In essence, we know very well the goals of **scholarly content industry stakeholders** (research organizations, publishers, funders...).

MyScienceWork team is highly involved and trained on **Open Science**. During the last years, we organised several **webinars** and **interviews** of experts on that topic. For more information, please check our [YouTube channel](#).



- Open source: GitHub
- Permissive Licence: MIT
- Team
 - 6 developers
 - MSW expert team of Data Scientists



CRIS CHALLENGES

Classic CRIS goals

Metadata structure

- ❖ Centralized research contextual metadata (people, organisations, projects, outputs...)
- ❖ Automate metadata harvesting and updating

Analytical purposes

- ❖ Understand its own research activities
- ❖ Nurturing its research strategy (invest., staffing...)

Institutional visibility

- ❖ Tech transfer
- ❖ Evaluation, ranking
- ❖ Media visibility

CRIS transformation

The Transformation of the Green Road to Open Access

by  Joachim Schöpfel ^{1,*}   Stéphane Chaudiron ¹,  Bernard Jacquemin ¹,  Eric Kergosien ¹,
 Hélène Prost ² and  Florence Thiault ³

Abstract

(1) Background: The 2002 Budapest Open Access Initiative recommended the self-archiving of scientific articles in open repositories, which has been described as the “green road” to open access. Twenty years later, only one part of the researchers deposits their publications in open repositories; moreover, one part of the repositories’ content is not based on self-archived deposits but on mediated nonfaculty contributions. The purpose of the paper is to provide more empirical evidence on this situation and to assess the impact on the future of the green road. (2) Methods: We analyzed the contributions to the French national HAL repository from more than 1000 laboratories affiliated with the ten most important French research universities, with a focus on 2020, representing 14,023 contributor accounts and 164,070 deposits. (3) Results: We identified seven different types of contributor accounts, including deposits from nonfaculty staff and import flows from other platforms. Mediated nonfaculty contributions (deposits by libraries, import of bibliographic records, migration from other platforms, etc.) account for at least 48% of the 2020 deposits. We also identified differences between institutions and disciplines. (4) Conclusions: Our empirical results reveal a transformation of open repositories from self-archiving and direct scientific communication towards research information management. Repositories like HAL are somewhere in the middle of the process. The paper describes data quality as the main issue and major challenge of this transformation.

Keywords: open science; open access; open repositories; green road; self-archiving; contributor; research assessment; monitoring

Schöpfel, J.; Chaudiron, S.; Jacquemin, B.; Kergosien, E.; Prost, H.; Thiault, F. The Transformation of the Green Road to Open Access. *Publications* 2023, 11, 29. <https://doi.org/10.3390/publications11020029>

(4) Conclusions: Our empirical results reveal a transformation of open repositories from self-archiving and direct scientific communication towards research information system.

CRIS main challenges

- A platform able to store, manage and exchange all metadata related to research activities
- A platform based on the **experiences of researchers and research managers** (metadata, workflows, forms flexibility...)
- A platform that allows admin and RIS managers **to take back the control of the platform** without advanced IT skills
- A **modular platform** able to take into consideration the specificities of every **disciplines, countries, organisations and functions** (Grants, CRIS, Research Outputs Repository, Peer Reviews...)



BEYOND CRIS – USE CASES

Why Polaris OS?



Open innovative technologies

- ❖ Data oriented technologies
- ❖ UX/UI: Reactive & Responsive
- ❖ High level of interoperability

Cost effective

- ❖ Less dev. needed
- ❖ Infrastructure
- ❖ Easy dev. environment

Low code

- ❖ Highly configurable
- ❖ Less IT Expertise (focus on added value feature development)
- ❖ Goal: no code solution

Flexible and sustainable

- ❖ Data models, forms, workflows...
- ❖ Multiple application / Highly customizable
- ❖ Sustainable ID

Use case – Peer review system

Context: as a research institution, I need a peer review system for the two journals we publish with specific workflows and criteria.

Solution:

- Selection of your **reviewers** (internal and/or external)
- Double/single **blind** or **open peer review**
- Reviewers complete their **reports online**

Bundesbank Discussion Paper
Wait for approval from the board [Workflow overview page](#)

Related project
2023-031 [Test MGU](#)

Title*
Test MGU

Authors

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Editor

Responsible editor
Manuel Guzman

Draft + non-technical summary

Discussion Paper draft (latest version) *

Non-technical summary *

method-system-fast-line-electro-optical-detection-wafer-defects.pdf
Admin Admin - 14/04/2023 18:44:44

method-system-fast-line-electro-optical-detection-wafer-defects.pdf
Admin Admin - 14/04/2023 18:44:49

[Select next step](#) [Workflow overview page](#)

Use case – Plagiarism

Context: researcher can submit articles within the RIS and a verification of plagiarism can be asked by the admin. research manager

Solution:

- **Interoperability** with existing plagiarism platform. e.g: Ithenticate
- Follow up the status of the **plagiarism process advancement**
- Get the **full report** automatically uploaded in the RIS

Plagiarism check

Waiting for editor to review report

Related project

2023-031 [Test MGU](#)

Version to be checked



method-system-fast-line-electro-optical-detection-wafer-defects.pdf

Admin Admin - 14/04/2023 18:44:44

Plagiarism check report *

Select next step

Use case – Reimbursement form

Context: a researcher asks reimbursement of conference expenses

Reimbursement request validation

Solution:

- Online reimbursement demand
- Several level of approvals
- Following up the status of the reimbursement
- Checking proof of expenses through file upload

The screenshot shows a web form titled "Reimbursement for conferences". The form contains the following fields and options:

- Reimbursement for conferences**: Information on the reimbursement procedure and list of institutions with allowed memberships are available on the intranet (click here).
- Researcher***: Text input field containing "Yugal Morjaria".
- Paper title ***: Text input field containing "Test Project April fifth".
- Conference name***: Text input field containing "Test Event April fifth".
- Project number ***: Text input field containing "2023-030".
- Submission of a paper to a conference***: Radio button options: Yes, No.
- Submission status**: Radio button options: Submission accepted, Submission under review, Submission not accepted.
- Submission fee**: Section with a heading "Please upload credit card/paypal sheet with amount *". Below it, a text input field contains "Submission fee.pdf". To the right of the field are two icons: a yellow download icon and a red trash icon. Below the field, the status is "Status ✓".

Use case – Bonus calculation

Context: as a research institution, I give bonus to my researchers depending the number of publications they did during a certain period of time and the journals they published in.

Solution:

- Easy access to publications information
- Online calculation of the bonus based on predefined criteria
- Follow up: alerts, status...

Welcome to Publication Bonus report
Validation page of the publication bonus report

Done ✕ ▼

This publication is accepted to be included in bonus calculation report.

Publications

Households' Inflation Expectations in Time of High Inflation: Do the Stylized Facts Hold? ▲

Publication stat	. rank	Journal ranking A	Bonus report state
Open			Open

Authors
Misin, Tobias

Continue workflow

Use case – Contract management

Context: management of contracts related to research activities such as research project contracts, partnerships... has now an important place in academic institutions.

Solution:

- Get the **full view** of all ongoing and terminated contracts
- Automate the follow up of contracts thanks to **alert feature**
- **Search for** contracts through **filters**: dates, types, conditions, stakeholders...

The screenshot shows a web interface for contract management. At the top right is a search bar with a magnifying glass icon. Below it are several filter checkboxes: Session, Project number, Applicant, Scientific title of the research project, Thesis title, Project status, Assigned reviewers, Reviewers who already submitted the report, Assigned reviewers (Midterm), Reviewers who already submitted the report (Midterm), Assigned reviewers (Final), Reviewers who already submitted the report (Final), Allowed amount, First bank transfer, and Second bank transfer. Below the filters is a table with columns: Session, Project number, Applicant, Scientific title of the research project, Project status, Assigned reviewers, Reviewers who already submitted the report, and Actions. The first row of the table shows: GRT-2023-Test, 2208, Yann Mahé, Main Documents, Submitted, and empty cells for Assigned reviewers and Reviewers who already submitted the report. Below the table, the details for the selected document are shown. It includes a section for 'Main Documents' with three items: 'Application Document', 'Project Document: ChatGPT_Comparison_Scholarly_Abstracts.pdf (0.24 KB)', and 'CV: 21582440221140358.pdf (1.18 KB)'. There is also a section for 'Reporters reviews' with one item: 'Review initial - Yann Mahé'. Below that is a section for 'Other documents' with two items: 'Other administrative document: 2205_2022B_STRYDOM Andre_JLF SAB Decision.pdf (0.20 KB)' and 'Other administrative document: Test.pdf (0.03 KB)'. At the bottom, there is a section for 'Add documents' with a 'Type' dropdown menu and a 'Files' section containing a dashed box with the text 'Files - Grant Project' and a link 'Click here or drop your file(s) directly'. A green 'SAVE' button is located at the bottom left of the 'Add documents' section.

Use case – Grant Management



Context: as a research institution that also have funder missions, I need to have a grant management module in my RIS.

Solution:

- All grant management platform features – e.g: call for projects, submission process, online reviews, scientific board meetings...
- Links between entities: research outputs, financial information, projects...

Funding schemes
Grant

Session number
GRT-2023B-Test

Project number
2209

Applicant
Admin Admin

Scientific title of the research project
Develop and train an artificial intelligence to classify rare diseases articles within large corpus of patents

Short project title for all public
An AI for rare diseases identification within large corpus of patents

Status
Accepted for review

Applicant information	Project summary	Project document	Budget	Documents	Reviewer Assignment	Reviewers reports	Project status
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Project type*
Advanced

Field of study*
Without linked pathology

Scientific title of the research project *
Develop and train an artificial intelligence to classify rare diseases articles within large corpus of patents

Short project title for all public *
An AI for rare diseases identification within large corpus of patents

Abstract (limited to 2000 characters) *
The goal of the project is to develop and train an artificial intelligence that will be able to automatically classify projects and patents coming from a hundred of sources. The classification will be based on the thesaurus created by MSW team.

Lay Abstract (limited to 2000 characters) *
The goal of the project is to develop and train an artificial intelligence that will be able to automatically classify projects and patents coming from a hundred of sources. The classification will be based on the thesaurus created by MSW team.

Possible starting date *
02/05/2023

5 keywords*
probiotic agents × Artificial intelligence × Machine Learning × Multidisciplinarity × brain ×



CONCLUSION

Conclusion – Flexibility & Adaptability

MSW

- Storing, managing and analysing contextual research activities metadata are crucial but **not sufficient**
- Admin tasks related to research activities must be handled by CRIS
- **Specificities** of countries, research fields and researcher communities **must be part of CRIS customisation**
- CRIS must **digitally translate users' offline practices**
- CRIS must **simplify** as much as possible the administrative tasks related to research activities

QUESTIONS?



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