

Current Research Information Systems in France

Fragmentation, Interoperability, and Emerging Paths toward Coordination

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Extended Abstract

This paper examines the landscape of current research information systems (CRIS) in France, situating it at the intersection of research governance, digital infrastructures, and science policy. CRIS play a central role in managing, documenting, evaluating, and valorizing scientific activity. They support a wide range of functions, including project monitoring, reporting, strategic decision-making, evaluation, and public dissemination of research outputs. Despite their growing importance, CRIS remain relatively understudied in the French context, both in academic literature and in national policy analyses.

France ranks among the leading global research nations, with a dense and diverse research ecosystem composed of universities, national research organizations, grandes écoles, research laboratories, and private-sector R&D actors (OST, 2024; MESR, 2024; OECD, 2025). This institutional complexity, combined with long-standing traditions of organizational autonomy and multi-supervision of research units, has profoundly shaped the development of research information systems. Rather than converging toward a unified national CRIS, France has historically favored a pluralistic and decentralized approach, resulting in a fragmented and heterogeneous landscape of tools, platforms, and practices.

The first part of the paper provides a contextual overview of research information management in France. It highlights the scale and diversity of the national research system, as well as the wide range of digital tools mobilized to manage research-related data. These tools range from simple spreadsheets and local databases to more sophisticated platforms incorporating decision-support functionalities, artificial intelligence, and knowledge graphs. While some systems are explicitly designed for research management, many others only partially address CRIS functions, leading to overlaps, redundancies, and gaps in coverage. Despite France's early involvement in international standardization efforts - most notably through its contribution to the development of the CERIF standard - the visibility of French CRIS remains limited at the European and international levels.

The analysis then turns to research organizations, with particular attention to major national bodies such as the CNRS, INRIA, and INRAE. These organizations have developed internal systems to manage scientific information, often relying heavily on external platforms such as the HAL open archive for publication tracking. The CNRS's long-standing Labintel system is examined in detail as a paradigmatic example (Harry, 2013). While Labintel constitutes a robust and institutionalized reference system for structures, personnel, and administrative data, it does not fully meet the criteria of a contemporary, researcher-centered, interoperable CRIS. Its primary focus on administrative management, limited coverage of the research lifecycle, and weak alignment with international interoperability standards illustrate the broader challenges faced by large research organizations in evolving toward more integrated research information infrastructures. At the same time, such systems could, in principle, form the backbone of more comprehensive CRIS architectures if appropriate technical and governance conditions were met.

The third section addresses higher education institutions, where the heterogeneity of CRIS solutions is even more pronounced. Recent national audits reveal a fragmented landscape characterized by a wide variety of locally developed tools, shared solutions promoted by national agencies, commercial software, and ad hoc arrangements (IGESR, 2025). Governance emerges as a recurrent weakness: responsibility for research information systems is often ill-defined, and data quality processes remain uneven. The abandonment of the CapLab project at the end of 2024 - despite its ambition to provide a shared national tool for project and activity tracking - illustrates the difficulties of achieving large-scale mutualization in a context marked by institutional diversity, resource constraints, and differing priorities. As a result, research-related data within higher education institutions remain highly siloed, complicating reporting, evaluation, and strategic steering.

At the laboratory level, the paper highlights a rich but largely invisible ecosystem of locally developed solutions. Surveys show that many laboratories have built their own tools to manage publications, projects, bibliographic references, and activity reports, often in response to immediate operational needs (Schöpfel et al., 2024). These systems display varying degrees of sophistication, sustainability, and alignment with FAIR principles. While some laboratories rely on minimal solutions centered on bibliographic management and HAL deposits, others have developed more elaborate tools that partially replicate CRIS functionalities. However, these initiatives are frequently dependent on a small number of individuals, raising issues of maintenance, scalability, and long-term viability. Laboratories constitute both a site of innovation and a point of fragility in the French CRIS landscape.

A central theme of the paper is the growing importance of persistent identifiers (PIDs) as a key lever for interoperability, data quality, and administrative simplification. Since 2019, and more explicitly from 2023 onward, France has engaged in a national strategy to promote the adoption of unique and persistent identifiers for researchers, institutions, publications, projects, and other research objects (MESRI, 2021; Blanc, 2025). This strategy, supported by collaborative governance structures and alignment with international identifier systems such as ORCID and ROR, seeks to improve data circulation without imposing a single, centralized information system. By enabling the “tell us once” principle, PIDs are presented as a pragmatic solution to the challenges posed by institutional diversity and system fragmentation.

The paper then reviews several recent and ongoing projects that illustrate different approaches to research information systems in France. The CapLab project, led by AMUE, represents a top-down attempt to rationalize and mutualize research information management across institutions, ultimately limited by insufficient adoption (Thouy, 2021; Bounague et al., 2021). In contrast, CCRISolid exemplifies a bottom-up, community-driven approach focused on modularity, openness, and interoperability (Reymond & Dornbusch, 2024; Reymond & Tabariès, 2024). Built on a consortium model and leveraging technologies such as knowledge graphs and automated data harvesting, CCRISolid aims to provide reusable building blocks rather than a monolithic system. The scanR platform, developed by the Ministry of Higher Education and Research, is analyzed as a national discovery tool grounded in open data and open science principles (Jeangirard, 2024). While scanR does not function as an operational CRIS, it plays a complementary role by aggregating and visualizing research information at a national scale.

Additional initiatives, such as the Open Science Barometer, further blur the boundaries between research information systems and research monitoring tools (Bracco et al., 2025). Although not designed as CRIS per se, these platforms rely on similar data sources, standards, and identifiers, and increasingly contribute to the broader research information ecosystem. This observation supports the paper’s argument that the French CRIS landscape is best understood not as a set of discrete systems, but as a loosely coupled constellation of tools, platforms, and infrastructures.

In its concluding section, the paper identifies a set of opportunity factors that may shape the future of research information systems in France. These include the growing emphasis on administrative simplification, the evolution of research funding mechanisms toward project-based and performance-oriented models, the expansion of industrial partnerships, and the increasing importance of international and European collaborations. European university alliances, in particular, are highlighted as potential drivers of convergence and experimentation, even as they expose persistent challenges related to interoperability and governance across national boundaries.

Overall, the paper argues that the future of research information systems in France is unlikely to take the form of a single, unified national platform. Instead, it is expected to remain decentralized, reflecting the structural diversity of the French research system. However, this decentralization does not preclude greater coherence. On the contrary, shared standards, persistent identifiers, interoperable architectures, and collaborative governance mechanisms offer concrete pathways toward a more connected and resilient research information ecosystem. By framing CRIS not merely as technical tools but as strategic infrastructures at the heart of research governance, the paper contributes to ongoing debates on how digital systems can better support scientific activity, institutional decision-making, and public accountability in complex research environments.

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