

A decade of innovation and influence for the ISSN International Centre (2014-2024)

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An article published in 2015 traced the history of the ISSN International Centre since its foundation (i). As it prepares to celebrate its 50th anniversary, the ISSN International Centre (or International Centre for the Registration of Serial Publications, CIEPS) has evolved by strengthening its role as a bibliographic authority and creating a metadata portal and related services used worldwide. This reflects the organization's commitment to technological innovation and to promoting more collaborative governance involving all members of the network. Since 2015, the Center has significantly expanded its activities and cooperation, particularly through the expansion of its network into new regions. By developing new tools and services, it has reaffirmed its place at the heart of the global bibliographic infrastructure.

Created in 1975 as an intergovernmental organization responsible for assigning International Standard Serial Numbers (ISSNs), the Center plays an essential role in managing and coordinating a global network of 96 national centers in 2025. Its responsibilities include assigning ISSNs, establishing partnerships, and managing and improving international standards. The Center ensures that serial publications such as journals, newspapers, websites, blogs, and others are uniquely identifiable worldwide.

This article reviews the changes at the Centre between 2015 and 2024 based on the annual activity reports published on its institutional website and statistics collected from its metadata production database and the ISSN portal.

1. New strategy and network growth (2014-2019)

In 2014, the Center defined four strategic objectives: to strengthen its network, improve the products and services based on its metadata, develop new partnerships, and promote free access to the data in the ISSN network.

As part of its efforts to attract new member countries, the Center undertook an update of its institutional website (ii) to improve its content. This overhaul included the translation of the site's interface and resources into the six official languages of the United Nations, namely Arabic, Chinese, English, French, Russian, and Spanish. By providing multilingual information, the Centre ensured that information professionals, librarians and researchers from diverse backgrounds could access essential information on the services of the ISSN network and thus contribute to its development. In addition to broadening access to the Centre's offerings and its network, this initiative was in line with member countries' desire to promote diversity and equitable access to

bibliographic tools and data worldwide. The multilingual approach also strengthened the cohesion of the network by enabling more harmonious communication and collaboration between member countries.

The ISSN portal (iii), launched in 2018, was the second key initiative of this period. This portal has become the global authority for identifying serial publications. At the end of 2024, the portal contained a total of 2.4 million titles, including 395,000 digital titles (iv). Before 2018, access to ISSN network data was limited to paying subscribers. By making a subset of metadata available free of charge under a freemium model, the portal has become an indispensable tool for librarians, researchers, and publishers across the world. The portal recorded around 6,000 visits per day in its first year of existence and now receives 7,860 visits per day. It has become the one-stop shop for identifying serial publications and ensuring, for example, that they are correctly archived digitally.

This technological modernization effort was accompanied by a campaign to recruit new member countries, which proved highly successful. In 2014, the ISSN network had 88 member countries. Ten years later, it has 96. Austria, Panama, Peru, Russia, and Ukraine joined the network between 2015 and 2021. The United Arab Emirates, Mongolia, and the Sultanate of Oman joined the network in 2024. Three new national centers will open their doors in 2025, demonstrating the dynamism of the ISSN network and its reach across the globe. Each new center reflects the strengthening of an organization's library science knowledge, the empowerment of a territory to identify national publishers' publications, and the adoption of international standards and best practices in regions that are sometimes lacking in human and financial resources. The Center provides technical training, governance support, and access to the shared metadata infrastructure that forms the backbone of the network.

2. Governance and normative references for a global bibliographic infrastructure

The governance of the ISSN system is based on the principles of international cooperation, technical alignment, and equitable participation. This governance framework is implemented through biannual meetings of the General Assembly of member countries, annual meetings of the directors of the ISSN national centers, strategic working groups on standards, technical partnerships, and dynamic engagement with international standardization bodies. Since 2014, the Center has undertaken fundamental work to modernize its normative corpus, including the revision of ISO 3297, the updating of the ISSN Manual, and regular collaboration with the MARC 21 Advisory Committee hosted by the Library of Congress (USA).

2. 1. Revision of ISO 3297: Adapting the standard to changes in publishing

ISO 3297, which defines the international standard number for serial publications, is the cornerstone of serial publication identification worldwide. As the official registration authority for this standard, the Center led the recent revision process that resulted in the publication of a new edition in 2022. This revision was motivated by the need to adapt the standard to the realities of

digital publishing, multilingual metadata, and complex publishing scenarios including title changes, medium variations, and the emergence of hybrid and digital journals.

The updated version of ISO 3297 introduces several major innovations:

- Expansion of the concept of Cluster ISSNs: the standard has broadened the definition of these specific ISSNs to allow the grouping of serial publication titles on the basis of more diverse relationships—such as language editions, titles throughout their history, and medium variations—providing a more accurate view of the structures of serial publication families.
- Expansion of the range of eligible resources: the range of continuing resources eligible for an ISSN now includes not only traditional serial publications (journals, newspapers, magazines, etc.), but also integrative resources such as etc.), but also integrative resources such as , update websites, blogs, institutional repositories, and directories, regardless of their business model (open access, subscription, hybrid).
- Detailed construction rules for ISSN identifiers: ISSNs and Cluster ISSNs are now constructed according to ISO/IEC 10646 (UNICODE), with more explicit indications on machine readability, character string format, and the use of metadata fields for different types of digital and print media.
- Clarified allocation principles: the latest revision clearly states that the allocation of an ISSN does not imply approval of the content by the ISSN network and that ISSNs themselves are the property of the ISSN network and not of the publisher. It also reaffirms the need for a unique key title for each ISSN allocated.
- Increased metadata requirements: identification requests must include rich metadata, which is standardized and validated by the ISSN network. A specific appendix (Appendix C) defines a list of metadata for identification in the ISSN register.
- Improved machine readability and integration of metadata: the standard requires the integration of ISSNs and related metadata (including URIs and Cluster ISSNs) into online resources using formats such as Dublin Core, MODS, MARCXML or Schema.org. This improves search accuracy and discoverability on the web.
- Clarification of display rules: the display of ISSNs and Cluster ISSNs is now standardized: printed versions must display the ISSN on the cover or in the header, and online versions must include the identifier on the title screen and, ideally, at the article level. Each version must refer to the others for complete cross-identification.
- Revision of provisions relating to metadata interoperability: Annex E has been expanded to detail interoperability between ISSNs and other identifiers such as DOI, URN, GTIN, and OpenURL. The canonical URI for ISSNs is now specified to improve integration into linked data environments.

- **Governance:** The roles of the ISSN registration authority and its registration agencies have been formalized. The terminology of the standard no longer names specific entities (such as the International Center or National Centers) and instead focuses on functional responsibilities to ensure the continuity of the standard beyond organizations if necessary.

The revision process involved global consultation, rigorous testing in the ISSN database, and coordination with key stakeholders, including national libraries, standards bodies, and publishers. The result is a standard that is more relevant and consistent with metadata practices in today's dynamic publishing ecosystem.

2. 2. The ISSN Manual: a living, multilingual reference tool for the network

Following the revision of the ISO standard, a working group of around ten network members undertook a major revision of the ISSN Manual, its main reference document. The Center migrated the manual from a static PDF format to a collaborative wiki platform. This new format allows for continuous updates, cross-references between concepts, and examples integrated with the portal, greatly improving its usability. The wiki manual is automatically translated into Spanish, French, and Russian from the English master version.

Looking back in June 2025, we can see that the main chapters of this manual have been revised and supplemented, including the sections on ISSN allocation policy, the construction of record , minor and major title changes, the creation of key titles, abbreviation standards, title linking areas, and the management of electronic resources. A specific glossary has been added and the previous editions from 1973 to 2015 have been uploaded for reference. The manual now reflects evolving practices in metadata creation across the network, including guidance on identifying blogs and AI-generated serial publications, as well as updated principles for cataloging multilingual publications. Chapters have been added on procedures for resolving disputes between publishers and the transfer of record management between national centers. The manual also emphasizes interoperability with library management systems, resulting in better alignment with MARC21. Fields 246 and 880 have been refined to handle different forms of titles and non-Latin scripts. Field 857 is now used to enter data on archival holdings. These improvements ensure that the manual serves not only network members but also the bibliographic community as a whole, enabling solid integration into catalogs, search platforms, and metadata aggregators with the availability of four publicly accessible, continuously updated PDF versions.

2. 3. Proposals to the MARC 21 Advisory Committee to align bibliographic practices

The Center's involvement in the evolution of bibliographic standards is also demonstrated by its collaboration with the MARC 21 Advisory Committee, the governing body of one of the most widely used bibliographic formats in the library world. In light of the revised ISO 3297 standard and the enhanced functionality of the ISSN portal, the Center has prepared and submitted official proposals to introduce new fields and develop existing ones.

Three proposals have recently been discussed and accepted:

- Field 023 for recording group ISSN-L and soon ISSN-H;
- Fields 856 and 857 to support URLs and URIs for digital titles on publishing platforms and preservation agencies;
- Field 008/21 with six new codes added to reflect a wider range of continuing resources.

These proposals were developed in consultation with colleagues from the Library of Congress, the National Library of Finland, and other national bibliographic agencies.

3. Technical infrastructure as a foundation for the 2024 strategy

The introduction of the ISSN+ metadata production tool is the major recent transformation that underpins other projects aimed at improving data quality. Implemented in stages starting in 2020, ISSN+ replaced the Virtua system with a web interface that supports the creation, validation, and maintenance of ISSN data across the entire network. Designed to promote internal consistency within the database while allowing for flexibility at the national level, ISSN+ includes real-time quality checks and scripts shared among members. A dashboard system identifies anomalies, facilitating corrections before publication on the ISSN portal. By 2024, 45 national centers had created records in ISSN+, while 62 centers had contributed to the editing of more than 120,000 existing records. The adoption of the system has improved the overall quality of the data and strengthened the confidence of subscribers to the portal.

The Center has also significantly improved the quality of its data through systematic enrichment efforts using external databases such as CrossRef, the Directory of Open Access Journals (DOAJ), Mir@bel, OpenAlex, Scopus, and Wikidata. For example, the integration of DOAJ data ensures better coverage of open access titles with a y focus on selected publications. This enrichment strategy underscores the Centre's commitment to producing robust, interconnected, and high-quality metadata.

In 2023, the Center undertook an ambitious project to renovate the obsolete technical infrastructure of its portal. It also implemented measures to copy its data across several continents to ensure its availability and integrity in the face of geopolitical tensions or climate change. By investing in robust security protocols and backup systems, the Center has consolidated its position as a trusted repository.

4. New partnerships for innovative services

In 2019, the Center became the sole project manager for the Keepers Registry service (v), which centralizes preservation data for digital serial publications produced by archiving agencies active in several countries, including Germany, Brazil, the United States, and France. According to NASIG (vi), Keepers Registry is an essential service that lists the titles of periodicals archived for the long term and is particularly aimed at librarians specializing in preservation. Thanks to Keepers Registry, the Center has become the point of contact for organizations outside the ISSN network

and has thus expanded its sphere of influence.

The development of Keepers Registry has been a priority and now includes information from 20 different archival institutions. The service is particularly useful for academic institutions that depend on long-term access to digital resources. It enables them to make informed decisions about which journals to prioritize for preservation based on existing coverage. In addition, this initiative helps identify gaps in archiving efforts, highlighting areas where additional preservation measures are needed.

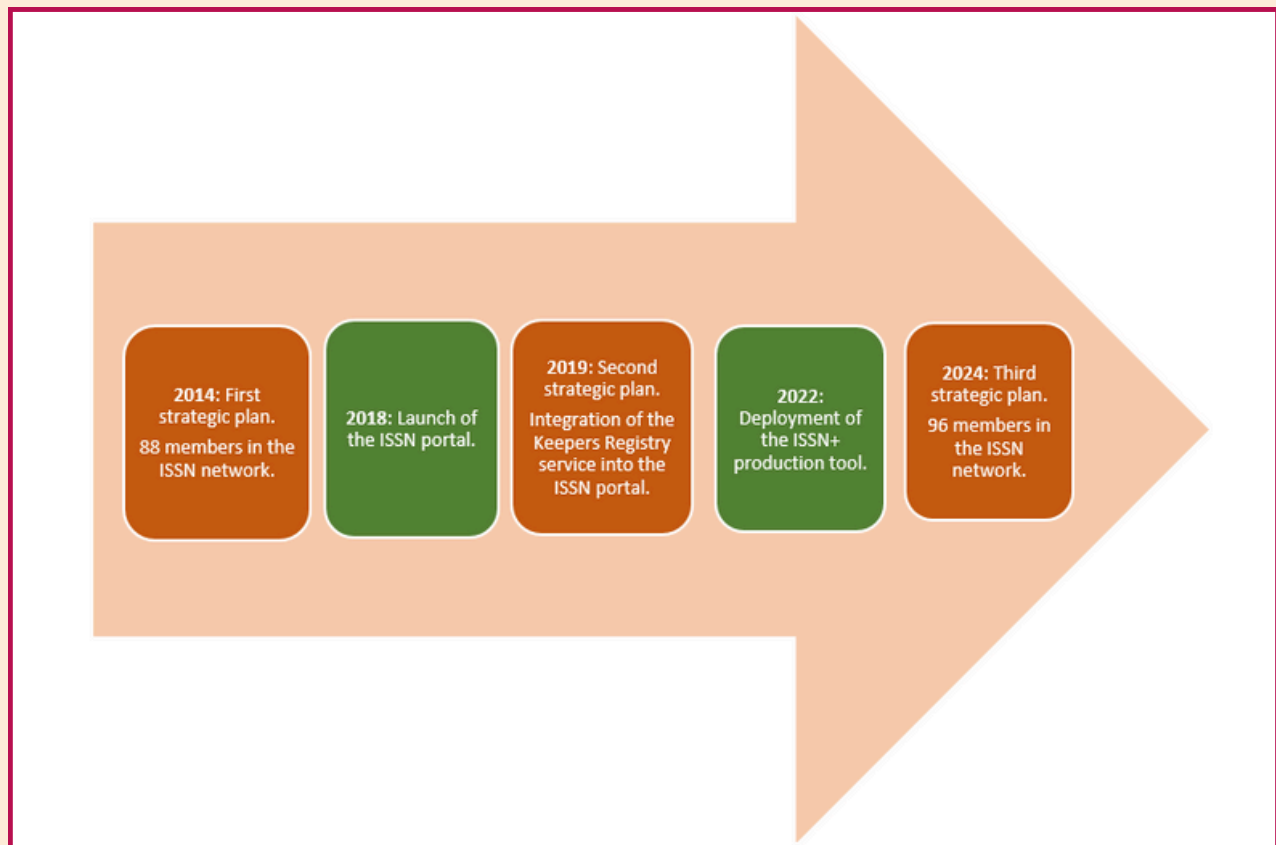
In partnership with the National Information Standards Organization (NISO) Transfer Working Group, the Center has developed the Title Transfer Alert Service (vii). Launched in 2018, TAS tracks transfers of ownership of journals between publishers who have signed the code of practice, helping to keep metadata up to date when titles change hands.

The Center's collaboration with publisher Springer Nature illustrates its commitment to improving metadata quality and ensuring the most complete identification of serial publications possible. Through a semi-automated workflow established with Springer Nature, the Center streamlines the process of assigning identifiers for new journal titles and monograph series. Under this partnership, Springer Nature submits metadata directly to the Center, which processes and assigns provisional identifiers before the metadata is finalized by national centers. This collaboration facilitates the tracking of Springer Nature's growing portfolio of published titles and reflects the Center's strategy of creating partnerships to improve the scope and interoperability of data in international bibliographic networks.

Conclusion

Looking ahead to 2029, the ISSN International Centre's strategic vision focuses on an extensive, inclusive and globally connected network that is the authoritative source for serial publications. The Centre aims to include around 100 national centers in the network. The portal will be the main source of information for print and digital serial publications, enriched by partnerships with emerging identifiers to improve interoperability and streamline information management. With the expansion of the Keepers Registry to under-represented regions, the Center will continue to promote the preservation of serial publications on a global scale. The Center is committed to leveraging technological advances, such as artificial intelligence, to provide quality data and innovative services to libraries, publishers, and information professionals worldwide. Through these efforts, the ISSN International Centre aims to maintain its status as the world's leading identification system, embodying its values of inclusiveness and robustness in information management.

Key milestones in the development of the CIEPS since 2014



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