# At Home among Strangers: Overcoming Tensions between Publishers' and Library Data: The National Library of France's Experimental Tool for Automated ISNI Attribution

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**Abstract:**

*The National Library of France (BnF, Bibliothèque nationale de France) is testing a new tool, called "ISNI Demande" ("ISNI Request") which is designed for ingesting data on authors coming from publishers, creating provisional authority records, sending them to the ISNI international database, sending ISNIs back to publishers and giving librarians opportunities to use external data for establishing authority control on resources. The "ISNI Request" scope is focused on legal deposit and the French book supply chain so as to strengthen the BnF's role and place in the national data ecosystem, in line with its legal missions. This new tool aims at overcoming differences between publishers' data and library data in order to create a virtuous circle, by maintaining specific rules and needs for both. It also questions the scope of quality data the National Library is committed to and the librarians' role regarding accelerating and growing data flows going in and out of the National Library system.*

**Keywords:** Authority data, ISNI, legal deposit, publishers, quality

## INTRODUCTION

The role played by national libraries in the international data ecosystem is obviously at a turning point. National libraries have specific missions to serve their national community and beyond. For example, the Bibliothèque nationale de France (BnF) founding decree, issued in 1994, states that "the National Library acquires and describes, on behalf of the State, French and foreign collections" of all media types and that it "is in charge of legal deposit. It constitutes and disseminates the National Bibliography" (French Republic, 1994)[1]. The continuous increase of the national output, mostly in digital form, doesn't question these fundamental missions, but raises the issue of their application. How to maintain and reaffirm the National Library's core mission when data flows are growing and speeding up? What kind of relationship must the National Library find with publishers and distributors so as to reaffirm its legitimate place in the national cultural landscape and in the book supply chain? How to find new ways of cataloguing which enable the Library to overcome the tension between accelerating data flows and the necessity to maintain the quality of data production? The National Library is considered a trustworthy third part by the national book supply chain. This implies to overcome this tension, both by being able to ingest and disseminate growing metadata flows and by maintaining quality and special label assigned to data produced and disseminated by the National Library.

Such an issue is not only crucial for bibliographic data, but also for authority data. The National Library produces trustworthy identifying data for authors and disseminates it. The book supply chain needs authors-identifying data. The BnF thinks it is possible to create a virtuous circle between these two needs. An international common identifier provides the opportunity for this: ISNI *(International Standard Name Identifier)* is well designed for data flow between publishers and libraries. It aims at supplying a cross-domain identifier for the public identities of persons and corporate bodies. Moreover, ISNI is based on an ISO standard (ISO 27729:2012)[2].

This is why the BnF has started the "ISNI Demande" ("ISNI Request") project. "ISNI Demande", currently in an experimental phase, is a tool that ingests structured data from the publishers' legal deposit declarations and creates provisional authority records that are then sent to the ISNI international database for ISNI attribution. This way, publishers gain trustworthy ISNIs and the BnF gains structured data, associated with ISNIs, which is a core for creating authority data.

Such a tool raises crucial questions for the future of national libraries. For instance: what is the scope of quality national libraries are committed to? What does it imply for the future of librarians' role? The "ISNI Request" project opens interesting avenues to bring answers to these questions.

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[1] Decree n°94-3 of 3d January 1994 creating the National library of France. Article n°2. This article confirms and updates the missions of the former "National Library" (not "National Library of France").

[2] More on ISNI: ANGJELI, Anila and MAC EWAN, Andrew and BOULET, Vincent (2014) *ISNI and VIAF – Transforming ways of trustfully consolidating identities*. Paper presented at: IFLA WLIC 2014 - Lyon - Libraries, Citizens, Societies: Confluence for Knowledge in Session 86 - Cataloguing with Bibliography, Classification &amp; Indexing and UNIMARC Strategic Programme. In: IFLA WLIC 2014, 16-22 August 2014, Lyon, France. ISNI is also mentioned by Best Practice for National Bibliographic Agencies in a Digital Age (by the IFLA Bibliography section).

# I- LEGAL DEPOSIT AND DATA PRODUCTION AT A CROSSROADS

## a- What the National Library of France needs

The starting point for setting up an experimental tool for automated ISNI attribution lies in the tensions in data flow. On the one hand, the editorial production seems to be ever increasing; on the other hand, national libraries are subjected both to legal missions assigned by the Universal Bibliographic Control (producing trustworthy data for its national editorial production) and to economic pressures. The main issue is how to reconcile the budgetary requirements, the need for quality data in line with the national libraries' missions, imperative for survival on the Web, and the acceleration and growth of the data flow.

At the National Library of France, legal deposit for printed books is increasing year after year (BnF, 2016).

**Figure 1- Growth of printed books received through legal deposit**

|  | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|
| Printed books received by legal deposit | 74,818 | 80,255 | 76,287 | 77,986 |
| Authority records created for legal deposit (printed books and serials) | 23,978 | 25,782 | 23,679 | 22,724 |
| Authority records updated for legal deposit (printed books and serials) | 28,042 | 28,507 | 24,620 | 22,676 |

Moreover, the emergence of digital resources is disruptive not only because of the sheer quantity of resources to be described, but also because it calls into question professional practices and the scope of quality the BnF is committed to. The BnF Performance Contract sets strategic priorities and main metrics for the implementation of the legal deposit of digital resources. The table below shows how many are expected to be integrated by legal deposit for the period between 2017 and 2021 (BnF, 2017):

**Figure 2 – Legal deposit projections for 2017-2021**

|  | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Digital books | Testing | 5,000 | 10,000 | 20,000 | 40,000 |
| Digital sound materials | Testing | 72,000 | 180,000 | 180,000 | 180,000 |

The Performance Contract clearly states that "the BnF shall continue adapting to the digital revolution (for instance by launching the e-legal deposit and by implementing new standards

from the Bibliographic Transition national program in the cataloguing practices)"[3] and "shall create new flows for collecting digital carriers for every collection falling into the legal deposit scope (books, newspapers, audiovisual documents, pictures, music)"[4]. For instance, the legal deposit for digital sound materials will significantly increase the data flow and highlights the need to reuse structured data provided by suppliers. This means to increase the automation of the cataloguing data flow, both for bibliographic and for authority data. At the same time, the projection for median cataloguing time is decreasing, from 7 weeks in 2017 to 6 weeks from 2018 on.

These elements show how crucial the need for both an automated or semi-automated and a trustworthy data flow is, so that the BnF remains in line with its founding decree which establishes the description of legal deposit resources as one of the National Library's core missions.

**b- What the book supply chain needs**

The book supply chain, namely publishers and distributors, are eager to use the National Library as a trustworthy third-part partner, for two reasons. The first one is the public status of the National Library. As a State institution, the National Library is considered as neutral, not depending on commercial or industrial constraints. The second one is that the BnF is considered as a key partner for data structuring and identifiers issues. Publishers and distributors have many internal databases and data flows identifying authors, translators, etc. They need bridges between them, so they need structured data strengthened by international identifiers. And the BnF can provide them.

In France, a small part of publishers' data (mostly from groups big enough to invest into it) is structured in ONIX. In 2014, the BnF developed an online tool that enables publishers filling their legal deposit declarations online in the dedicated Extranet to automate the process by sending an ONIX flow. This is converted into a provisional bibliographic record in the BnF's catalogue[5]. The need for identifiers applied to authors and other content producers stressed the necessity to extend the process to cover authority data. ISNI is now promoted by the *Commission de liaison interprofessionnelle du livre* (CLIL, Joint inter-professional book committee) which aims at developing common best practice for the book supply chain as a whole, and is comprised of representatives from booksellers and publishers. CLIL has included ISNI in its best practice Guidelines and promotes the inclusion of ISNIs in ONIX data flows. Besides, CLIL manages along with Dilicom the *Fichier Exhaustif du Livre* (Comprehensive book file), which is the descriptive file used by the French book supply chain. So far, ISNIs have been uploaded in bulk into this database from files provided by the BnF, but the book supply chain would like to get ISNIs faster, even before books arrive by legal deposit to the BnF and even prior to publication, with a comprehensive cover of the French output.

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[3] BnF, 2017, p. 17
[4] Ibid., p. 18.
[5] More on this process: S. Derrot and M. Koskas, *Legal deposit of eBooks in France and its bearings on cataloguing and the National Bibliography*, in IFLA WLIC 2015, 15-21 August 2015, Cape Town, South Africa. [http://library.ifla.org/1129/1/089-koskas-en.pdf].

These challenges are common to the National Library and publishers. The latter needs quickly provided trustworthy identifiers as a help for identification and internal data flows; the former also needs data (both bibliographic and authority data). To meet these needs, the BnF imagined a tool for exchanging structured data with identifiers for authors, i. e. ISNI, called "ISNI Demande" ("ISNI Request").
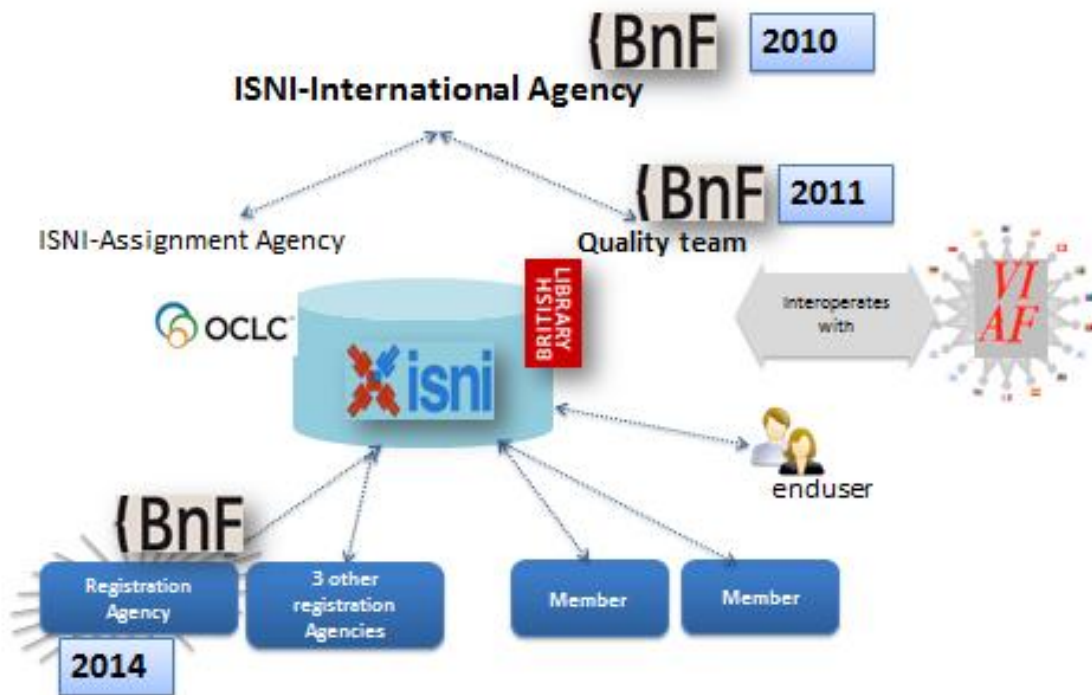
## II- ISNI AS A TOOL FOR BOTH PUBLISHERS AND THE NATIONAL LIBRARY

### a- ISNI within the BnF and the BnF within ISNI

The BnF is committed to ISNI in different ways. Along with the British Library, the BnF represents the Conference of European National Librarians (CENL) on the ISNI International Agency Board. The BnF is a member of the ISNI Quality Team, which aims at improving data processing and matching in the ISNI database, also with the British Library.

Besides, the BnF has been an ISNI Registration Agency since 2014. The aim is to assign ISNIs to persons and corporate bodies falling in the legal deposit scope. The BnF was the first national library in the world to become an ISNI Registration Agency and the third organization at international scale to set up one. The BnF coordinates with the ISNI International Agency for the assignment of ISNIs to its authority records for persons and organizations and disseminates the assigned ISNIs through its data diffusion services either in MARC formats or in RDF in the data.bnf.fr dumps[6].

**Figure 3- BnF within the ISNI ecosystem**



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[6] http://www.bnf.fr/fr/professionnels/anx_recuperation_donnees/a.recuperation_isni_produits.html.

The BnF has launched periodic uploads of ISNIs into its authority file in bulk from 2014 on. ISNI now covers 82% of authority data for persons and 20% of authority data for corporate bodies. The new needs expressed both by the BnF and by the French book supply chain urge us to find a new, smoother data flow. Starting in January 2017, the BnF has been setting up new tools both for making the data flow with the ISNI database faster and for reusing data coming from publishers to create authority records.

**b- Overview of the new data flow**

The new data flow is made up of two tools that make it possible to share data with publishers ("ISNI Demande", "ISNI Request") and with the ISNI database (based on the AtomPub protocol developed by OCLC).

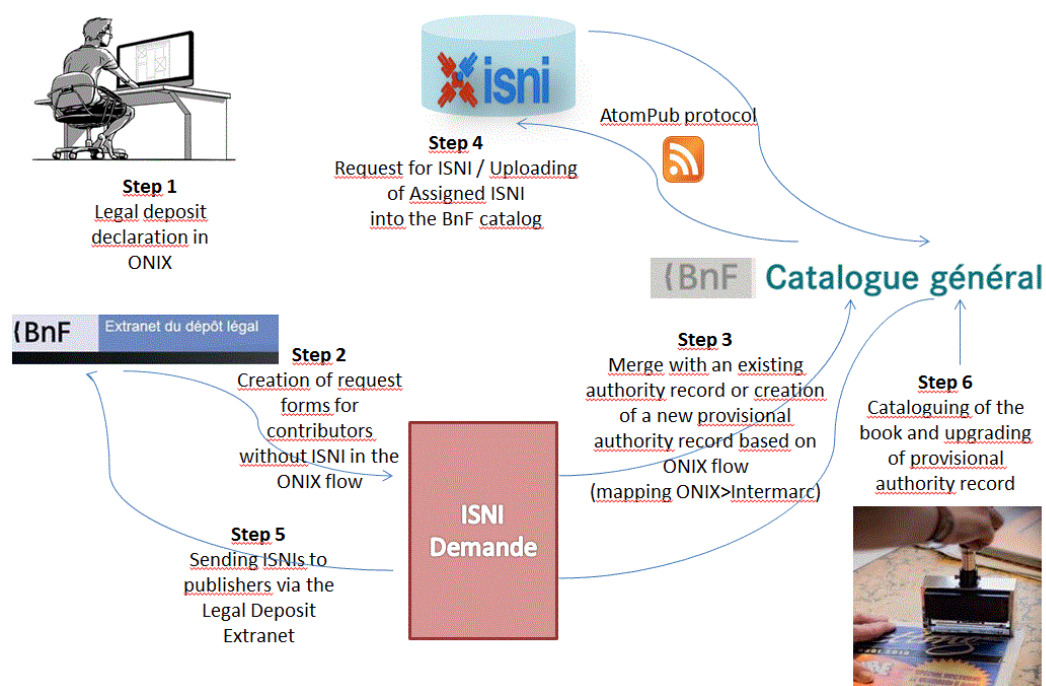**Figure 4- Overview on the "ISNI Request" data flow**



This data flow is based on structured data sent by publishers through their ONIX data flow. It can be broken into different steps involving different stakeholders. Our main purpose is to set up as automated a data flow as possible, which requires structured data.

At this experimental stage, the "ISNI Request" scope is limited to requests for ISNIs for person authorities generated from legal deposit declarations in ONIX data flow for books.

This tool aims at providing publishers with ISNIs for new authors. It also enables them to complete their database with ISNIs which they have not yet uploaded. However, it does not aim at enabling publishers to update their ISNIs.

The process is broken into 6 steps, as shown in the figure below.

**Figure 5 – Successive steps of the "ISNI Request" data flow**



Step 1. The publisher sends an ONIX flow of its legal deposit declarations through the Legal Deposit Extranet. This flow contains essential data for every contributor involved in the resource declared, including its ISNI when available.

Step 2. The "ISNI Request" application identifies the contributors without ISNI in every flow and creates an ISNI request form for every one.

Step 3. An automatic search is launched into the authority records for persons of the BnF's catalogue in order to associate the author in the request with an existing authority record. The results of this search can be seen in the "ISNI Request" application: the BnF ID number of the corresponding authority record(s) and its ISNI when available in the catalogue are indicated. The result of this search may be 1, several or 0 corresponding records. At this experimental stage, the merge between a request and an authority record requires a human intervention. If the associated BnF record already contains an ISNI, the ISNI request is completed. If there is no corresponding record, a provisional record may be created based on the ONIX data provided, after human validation (see below).

Step 4. The provisional authority records for persons are sent every week to the International ISNI base via the AtomPub protocol for ISNI assignment. The assigned ISNIs are downloaded automatically in the BnF's catalogue via the same protocol. The use of the AtomPub protocol is much faster than the previous data flow in periodic batches, which takes place only once or twice a year.

Step 5. ISNIs are sent back every week to publishers via the Legal Deposit Extranet.

Step 6. When the corresponding resource enters the BnF through Legal Deposit, it is catalogued. The provisional authority records for persons created by "ISNI Request" are

enriched and their status is upgraded so that they can be disseminated through its data diffusion services.

**c- A need for structured, accurate and comprehensive data from publishers**

The BnF strongly encourages publishers to provide structured ONIX data. The publishers' need for ISNIs is used as a springboard to promote the use of structured data in ONIX.
As indicated above, at this experimental stage, the merge between an ISNI request and its corresponding authority record in the BnF's catalogue requires a human validation, which is very time consuming.
For an automated processing through "ISNI Request" and for assignment of trustworthy ISNIs, data provided by publishers must not only be structured but also accurate: for example, no mistake in the surname or last name, no duplicates or mixed identities.
Lastly, publishers' data must also be comprehensive: for example, providing the EANs of previous titles for every author should facilitate the automation of the merge between an ISNI request and its corresponding authority record. This is currently being tested.
Also, providing bibliographic dates or at least years of birth and death (when appropriate) would not only make it possible to automate the "ISNI Request" process but also to provide key data to the International ISNI base in order to be assigned an ISNI.
Thus the BnF uses the following table to convince publishers to send structured ONIX data with relevant information.

**Figure 6- Structured data on persons needed for "ISNI Request" and ISNI assignment**

|  | Information needed to be accepted by "ISNI Request" | Information needed for automated processing | Information needed to be assigned an ISNI |
| --- | --- | --- | --- |
| **Local ID** | Yes |  |  |
| **Surname, First name** | Yes | Yes | Yes |
| **Type of contribution** | Yes | Yes | Yes |
| **Function** | Yes | Yes | Yes |
| **Birth date** |  | Yes | Yes |
| **EAN of previous publications** |  | Yes |  |
| **Language and nationality** |  | Yes |  |
| **Bibliographic data (title, ISBN, associated authors)** |  | Yes | Yes |
| **URL address** |  |  | Yes |

If publishers send insufficient data on authors for ISNI attribution, their request will be denied and they will only be able to retrieve ISNI the "ordinary" way, by the pre-existing data flow based on periodic batches.
If the conditions presented above are fulfilled, a provisional authority record is created in the BnF's catalogue.

## d- Enriched MARC and automated creation of provisional authority records

To create a provisional authority record, it was necessary to map ONIX with the BnF internal format, INTERMARC-Authorities.

**Figure 7- Extract form the ONIX-INTERMARC mapping for a person authority record**

| Data | INTERMARC field | Mandatory or not | Repeatability | INTERMARC subfield | Mandatory or not | Repeatability | ONIX |
|---|---|---|---|---|---|---|---|
| **Name of person heading, first element** | 100 | Mandatory | Not repeatable | $a | Mandatory | Not repeatable | <Product> <DescriptiveDetail> <Contributor> <KeyNames> |
| **Name of person heading, other elements** | 100 | Not mandatory | Not repeatable | $m | Not mandatory | Not repeatable | <Product> <DescriptiveDetail> <Contributor> <NamesBeforeKey> |
| **Biographical dates** | 100 | Not mandatory | Not repeatable | $d | Not mandatory | Not repeatable | <Product> <DescriptiveDetail> <Contributor> <ContributorDate> <Date> <ContributorDateRole> = '50' and <Contributor> <ContributorDate> <Date> <ContributorDateRole> = '51'[7] |

This also implies the creation of new INTERMARC-A fields for data found in ONIX which are not in a traditional authority record. These new fields are the following:

**017:** Source of imported data.
**615:** Structured bibliographic data about the resource the publisher is sending to the BnF through legal deposit, including the EAN. This replaces a "traditional" authority record's 610 field devoted to bibliographic sources, which isn't structured and doesn't include the EAN.
**649:** Biographical note found in the ONIX flow. A traditional authority record has a short and neutral biographical note for identifying the person. The biographical note created by publishers can have a promotional approach which is not in line with authority data created and disseminated by a public institution. Moreover, this biographical note may contain personal information, whilst BnF authority data is subject to the French law on private data. This field is not displayed in the public catalogue.

Thus, a provisional authority record is created automatically from ONIX data sent by a publisher. Such a record receives a provisional status indicating that the record has been imported for ISNI assignment and is displayed in the public catalogue.

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[7] Code 50 means "date of birth"; code 51 means "date of death".

**Figure 8 – Provisional authority record created from ONIX data flow**

```
000         n7 ap22   2
001      FRBNF17103818
008      170130   frfre        19..              a 1
017      $o 3012166100000   $a 9782749154756   $d 20170112   $l fre   $t Interforum   $n onix/3.0
045      $a a
100      $w  0  b      $a Durrieu   $m Michel
615      $a Tourisme, la France n°1 mondial   $f de Michel Durrieu   $c Le Cherche Midi   $d 2017
         $i 9782749154756   $4 0070   $2 éditeur
649      $a Michel Durrieu a occupé pendant plus de vingt ans des postes de direction dans les plu
         s grands groupes mondiaux du secteur touristique. Directeur, depuis 2014, de la sous-dire
         ction de la Promotion du tourisme au ministère des Affaires étrangères et du Développeme
         nt international et représentant permanent de la France à l'Organisation mondiale du touris
         me, il est administrateur de Atout France, opérateur de l'État en charge de la promotion tou
         ristique de la destination France.   $d 20170112   $2 éditeur
```

This provisional record is destined to be sent to ISNI for assignment and to be the basis for the cataloguers' work, helping them to establish a validated authority record when the book mentioned in the 615 field arrives at the BnF.

**Figure 9 – The BnF provisional record shown in figure 8 once sent to the ISNI database (in MARC 21)**

```
000 459843907
002 $aTpr
003 $0000000045984390X$12017-02-02 13:03:53$aassigned$bno match initial database$c50
008 $a|$b|$c|$d|$e|$f|$gn$hn$i|$j|$k|$l|$m|$n|$oa$p|$q|$r|$s|
00A BNF:02-02-17
00B ISNI:17-06-17 04:08:14.000
00D BNF:02-02-17
00U utf8
00X 0
035 $lBNF$017103818
377 ##$afre$2BNF
700 ##$7Latn$aDurrieu, Michel$3public$2BNF
901 ##$a9782749154756$2BNF
910 ##$a@Tourisme, la France n°1 mondial$2BNF
941 ##$aaut$2BNF
970 ##$a1900$ccirca$2BNF
                                                                    1
```

When the resource enters the BnF through legal deposit, cataloguers link the bibliographic record to the corresponding authority record(s), use the provisional record(s) which they enrich and upgrade. For example, in the record shown below, the 649 INTERMARC field with the publisher's biographical note has enabled the cataloguer to create a 600 INTERMARC field with a biographical note in line with authority data standards.

The public fields in this record are disseminated on the Web through all BnF channels, such as data.bnf.fr and VIAF and through its data diffusion services either in MARC formats or in RDF in the data.bnf.fr dumps[8].

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[8] http://www.bnf.fr/en/professionals/bnf_data_sets.html

**Figure 10 – Authority record shown in figures 8 and 9 with an ISNI after a BnF cataloguer has completed it**

```
000         c1 ap22
001       FRBNF17103818
008       170130170207frfrem          19..                    a 1
017       $o 3012166100000  $a 9782749154756  $d 20170112  $l fre  $t Interforum  $n onix/3.0
031       $a 000000045984390X  $2 ISNI  $d 20170208
045       $a a
100       $w 0 b      $a Durrieu  $m Michel
600       $a Directeur de la sous-direction de la Promotion du tourisme au ministère des Affaires étra
          ngères et du développement international (en 2017)
615       $a Tourisme, la France n°1 mondial  $f de Michel Durrieu  $c Le Cherche Midi  $d 2017
          $i 9782749154756  $4 0070  $2 éditeur
649       $a Michel Durrieu a occupé pendant plus de vingt ans des postes de direction dans les plu
          s grands groupes mondiaux du secteur touristique. Directeur, depuis 2014, de la sous-dire
          ction de la Promotion du tourisme au ministère des Affaires étrangères et du Développeme
          nt international et représentant permanent de la France à l'Organisation mondiale du touris
          me, il est administrateur de Atout France, opérateur de l'État en charge de la promotion tou
          ristique de la destination France.  $d 20170112  $2 éditeur
```

## III- CHALLENGES

Having set up data flows and pipelines is not sufficient. As a public institution, the BnF is dedicated to serving its national (and broader) community and fulfilling its missions as defined by law. The "ISNI Request" project is still in its infancy and at an experimental stage. The BnF is facing many challenges in the development of such a tool. Those challenges are both external and internal: the place of the National Library in the French book supply chain, the international ISNI development, and the automation or rather the semi-automation of its internal data production processing.

### 1- Strengthening the data flow and defining a range of services: short-term challenges and long-term opportunities

So far, the BnF has been working with two distributors that act as hubs for publishers they serve. The first one is Interforum, which distributes 150 French-speaking publishers under the aegis of the Editis group; the second one is Hachette Livre. Together, they make up 15% of legal deposit declarations for books in the Legal Deposit Extranet (as of June 2017). The data flow based on the ONIX coming from these distributors is at an experimental stage as far as ISNI assignment is concerned. The BnF is eager to automate ISNI assignment as far as possible. After the end of the strengthening stage, BnF will be able to open this service more broadly (for instance, to resources other than books). Consolidations are now under way.
Through the "ISNI Request" project, the BnF is defining a service offering for the French book supply chain. This service is based on:

> a- ensuring reliable delivery times by direct exchanges between the BnF and ISNI and by automating internal data flows as much as possible;

> b- ensuring reliable ISNI assignment, based on the BnF's participation in the ISNI Quality Team.

But to take advantage of this service, structured and comprehensive ONIX data is needed. Publishers take responsibility for their ONIX data. If their data is poorly structured, the BnF won't be able to provide them with ISNIs. Moreover, the scope of the "ISNI Request" project is closely linked to legal deposit. For the BnF, it is an opportunity to fulfill its national, public missions as defined in the BnF founding decree of 1994. The BnF has to provide both the national resources received through legal deposit and the metadata describing them to citizens and the national community, using the latest technological developments.

So, the "ISNI Request" project enables the BnF to act as a major actor in the French book supply chain by providing ISNIs in line with its legal missions and a clear range of service. The BnF can also create a management console for ISNI assignment, which is reusable for other projects and could be used to help defining an ISNI range of service by public institutions at an international level.

## 2- What does "quality" mean?

Automating authority data creation, even if a cataloguer does enrich and/or validate it, raises the issue of quality. There are two different sides of this issue.

The "ISNI Request" project doesn't aim at an ideal quality level. Quality levels only make sense when linked to a clear purpose. Here, the purpose is to assign trustworthy ISNIs and to create a provisional authority record, streamlining the metadata production process while maintaining the BnF's missions. The BnF asks publishers to provide data designed for ISNI assignment and for creating an authority record. Concretely speaking, the BnF has defined its specifications for publishers in order to receive data sufficient to identify the persons and distinguish a given person from another. Thus, the BnF remains in line with the initial purpose of authority data and promotes authority data amongst publishers. The "ISNI Request" project is also in line with new uses for authority data: on the one hand, "ISNI Request" acts as a return to the roots for authority data, primarily close to legal deposit and the National Bibliography, in line with the Universal Bibliographic Control. At the BnF, the very first authority file was developed when the National Bibliography was automated in the 1980s. But "ISNI Request" also shows how pivotal a national authority file can be as a crossroads between the National Library's missions, third-part partners' needs and international databases and identifiers. Quality is defined so as to meet all these needs.

Besides, quality means using structured data. Without structured data, no automated data flow is possible. The "ISNI Request" project enables the BnF to highlight the need for structured data in massive data flows amongst the French book supply chain. The ISNI use case gives publishers and distributors a concrete illustration of the crucial role of structured data.

## 3- Reconciling automatic flow with human expertise

The "ISNI Request" project also is a window on the future of the cataloguers' task and job. The BnF doesn't oppose automatic data flow and human expertise. The question is where, when and how a human expertise is needed when the data flow is increasing and human resources are decreasing, keeping in mind the BnF's missions.

The BnF has two different intervention levels on authority data. The first one falls in the scope of cataloguers for the National Bibliography: they create authority data as needed for the description of the resources, and link it to the bibliographic data. The second one is carried out by authority data experts, who oversee the overall quality level of authority data and lead massive adjustments and corrections on data, both automatically and manually. The

"ISNI Request" project is a tool taking part in the changes affecting the librarians' role regarding metadata. With this project, the cataloguers' task is expected to be focused on updating and controlling records created by data flows; and the experts' task on maintaining and improving data flows and on analysing them. The authority data expert is becoming a "data librarian", in the latest instance of what could be seen as an incremental automation process started in 2009 with the Legal Deposit Extranet.

The Extranet was devised to enable publishers to fill their mandatory legal deposit declaration online. First, it was entirely manual, then publishers were enabled to send ONIX flows, and now, through these flows, the BnF has built the "ISNI Request" tool. Through all these developments, the publishers' metadata has been converted into MARC provisional records that cataloguers have built on. The hope of library management was to save time on cataloguing; the apprehension of cataloguers, that the automation would go as far as to replace their work, or that they would be overseers instead of producers of metadata. The reality was, of course, more contrasted. For the time being, more than half of active publishers use the Extranet. But of those, the vast majority still fills their declarations by hand. The quality of data varies greatly from one declaration to the other, and the benefit of the provisional records derived from these declarations is in the quantity of information cataloguers have at their disposal. The actual cataloguing work for bibliographic records is still very much done by humans. ONIX makes a difference in that metadata is structured and standardised. The experience with ONIX bibliographic metadata is proving beneficial because it highlights how publishers' and library data can complement rather than compete with each other. BnF records are enhanced with publishers' data such as summaries or keywords, while the added value of the Library's work is in the structured, verified, standards-compliant metadata produced by cataloguers.

In the same way, the "ISNI Request" project could be a proof of concept showing how automated and manual processes can be combined in order to build a convenient, trustworthy and useful data flow. Using data coming from third parties, in this case publishers and distributors, does not mean to erase the librarian's role but to reposition it, so as to open new opportunities for libraries and public institutions within the global data ecosystem.


**CONCLUSION**

The BnF is developing the "ISNI Request" project in order to meet different needs: adapting the cataloguing process to the new conditions of an increasing documentary production, while maintaining its public, national missions, namely legal deposit (in both aspects of collecting and cataloguing); strengthening the international position of a national library amongst international databases, actors and identifiers; repositioning the National Library as a trusted party for the national stakeholders; launching a concrete reflection on the future of librarian tasks. ISNI, as a cross-domain identifier, is a great tool for sharing needs, issues and data. Its new legitimacy in the book supply chain is a tool for strengthening data flows and sharing between publishers and libraries. Moreover, as an identifier is built on metadata, "ISNI Request" allows giving a crucial role to structured data. It also raises strategic questions: where can national libraries bring added value in the global data ecosystem? How can national libraries define their responsibility perimeter, to which an explicit quality level is applied? How can they define this quality level and make cataloguers' task change in line with these new opportunities? With the "ISNI Request" project, now in its trial stage, the BnF is experimenting with possible answers to these questions.

**References**

BnF, 2016 : *Observatoire du dépôt légal : reflet de l'édition contemporaine*; BnF, 2016, http://www.bnf.fr/documents/dl_observatoire_2016.pdf (in French)

BnF, 2017 : *Contrat d'objectifs et de performance 2017-2021*, BnF, 2017, http://www.bnf.fr/fr/la_bnf/connaitre_bnf/a.contrat_performance.html (in French)

French Republic, 1994: Decree n°94-3 of 3d January 1994 creating the National library of France.