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Journal of the Royal Library of Belgium

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is a peer reviewed scholarly journal devoted to all fields of scientific research regarding the Library's collections and activities, including manuscripts, books, prints & drawings, maps, library and information sciences, the history of texts, literature, numismatics and the history of music.

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Viglius d'Aytta de Zwichem, silver medal by J. Jonghelinck, 1568.

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HOW TO ASSESS AND IMPROVE THE COVERAGE OF THE LEGAL DEPOSIT COLLECTION IN BELGIUM?

ANN VAN CAMP

Abstract: National libraries throughout the world ensure that the nation's published heritage is collected, catalogued, preserved, valorised and made accessible to present and future generations. In many countries a legal deposit system supports building the national collection. Although reaching a coverage of 100% remains an elusive goal, it is worth striving to achieve a comprehensive collection. This exploratory study first examines how to assess the completeness of the legal deposit collection in Belgium. Next, a chronological review of various methods and best practices applied in other countries leads to a number of insights and recommendations for a future assessment. Finally, a wide range of measures are presented to enhance compliance with legal deposit legislation and to innovate the monitoring process with the aim of improving the coverage of the Bibliography of Belgium.

Collecting and preserving *all* Belgian publications is part of the mission of KBR, the Royal Library of Belgium. That elusive but valuable goal is adapted into a more realistic objective in KBR's Action Plan 2019–2021: “to actively stimulate authors and publishers to deposit their publications, aiming at the highest possible degree of coverage.”¹

Still, the following questions remain: what is in fact “the highest possible degree of coverage” of the legal deposit collection, and how to assess KBR's progress? What is the starting point, and what is the target? Only when one has a reliable baseline measurement, one can monitor the coverage in the course of time and evaluate whether the measures adopted actually bear fruit, or not. To measure is to know. In order to set an acceptable and realistic target, having a benchmark would also be useful: what are the coverages of deposit collections at other national libraries, and how were they measured?

IN SEARCH OF A METHOD TO ASSESS THE COVERAGE

How to measure the coverage of the legal deposit collection preserved at KBR? To address this issue, let us start by establishing the facts and putting together the figures that we do know. Then we can calculate the unknown coverage, based on the information we have.

(1) KBR, *Actieplan 2019–2021* (Brussels: KBR, [2019]), 9.

Which Formula Do We Need?

How to measure – or at least estimate – the degree of coverage? In theory, the formula is nothing more than child's play:

Current number =	How many Belgian publications subject to legal deposit does KBR already have?
Total number =	In total, how many Belgian publications subject to legal deposit are published?
Current coverage in % =	$(\text{Current number}/\text{Total number}) \times 100$

This calculation gets complicated, however, when we try to fill in the total amount of Belgian publications subject to legal deposit. To determine the total number, we need:

- either a total overview of all Belgian publications subject to legal deposit
- or the exact number of publications currently absent from KBR, in addition to the current number of publications that are already preserved in the national deposit collection.

What are 'Belgian Publications' According to the Legal Deposit Law?

Whatever approach we choose, we first need to know exactly which publications we need to count. How does Belgian legislation define and characterise publications subject to legal deposit?

In Belgium the legal deposit was instituted by the Law of April, 8, 1965² and enacted on January, 1, 1966 to ensure that our nation's cultural heritage is preserved for future generations. It is not the goal of this article to elaborate on the details of Belgian legal deposit law, but generally speaking, as the national library of Belgium, KBR collects and preserves since 1966:

- all publications that are published on Belgian territory;
- all publications by Belgian authors domiciled in Belgium and whose work is published abroad.

For the time being, the legal deposit of digital publications remains voluntary. There is already an extension of this deposit law which includes print to digital publications, but it has not yet come into force, pending an implementation modality of a Royal Order.³ Therefore, in this article we focus only on the coverage of print publications.

Due to the linguistic and cultural diversity in Belgium, within the overall category of contemporary 'Belgian' publications, we can distinguish three subsets, according to the language or community in which they were published:

- in Dutch or in the Flemish Community,
- in French or in the French Community,
- in German or in the German-speaking Community.

(2) *Belgisch Staatsblad/Moniteur belge* of June 18, 1965.

(3) Law of July 8, 2018, article 1 (*Belgisch Staatsblad/Moniteur belge* of July 20, 2018, second edition) that will enter into force by a forthcoming Royal Order.

For centuries, the ‘national’ heritage has been located on the crossroads of at least three cultural worlds that reach beyond the national borders of Belgium and that are interwoven with the culture of our neighbouring countries:

- the ‘Vlaamse Gemeenschap’ & the Netherlands,
- the ‘Fédération Wallonie-Bruxelles’ & France & Luxembourg,
- the ‘Deutschsprachige Gemeinschaft’ & Germany & Luxembourg.

Thus when we speak of collecting Belgian cultural heritage it extends beyond linguistic, geographical and cultural borders. It is multilingual, and multifaceted.

To be clear, the legal deposit collection is only a part of the Bibliography of Belgium, and the shelf marks that start with ‘BB...’ (for monographs) or ‘(BB) BD’ (for periodicals) refer not only to the legal deposit collection, but to the Bibliography of Belgium in its entirety. Actually, the Bibliography of Belgium has been published as early as February 1875 and inventories catalogue records of the following publications received at KBR:

- publications published in Belgium,
- publications by Belgian authors published abroad.

So from 1966 the Bibliography of Belgium corresponds with the legal deposit collection. Nowadays, it is published online every month and its electronic archive dates as far back as 1998.

What Characterises ‘Belgian publications’?

Now that we have clarified in general terms which publications are subject to Belgian legal deposit law, we wonder how we can recognise them in a vast amount of publications worldwide. What characterises Belgian publications? Which metadata allow us to unequivocally identify a publication as subject to Belgian legal deposit law?

If we manage to establish unambiguous criteria, then an advanced search with Boolean operators would enable us to easily or automatically trace the publications that should be part of the legal deposit collection. First we will search for relevant metadata of the documents themselves and secondly we will examine the metadata of the authorities linked to these documents.

In search of ‘Belgian’ bibliographic metadata

1. The legal deposit number

An obvious criterion to identify Belgian publications subject to legal deposit is the legal deposit number that all Belgian publishers or author-publishers are required to mention in

the colophon.⁴ A legal deposit number always begins with “D/YYYY” where YYYY stands for the year of deposit, followed by:

- in case of a publisher: his publisher number (assigned by KBR) and a sequence number in his annual register of publications, for example, “D/2020/3029/0007”.
- in case of an author-publisher: his name and “uitgever” or “éditeur”, for example, “D/2020/Jan Janssens, uitgever”.

However, this criterion does not provide us with an exhaustive list of documents for multiple reasons:

- Belgian legal deposit law also includes works of Belgian authors that are published abroad. Those works have to be deposited, but do not have to mention a Belgian legal deposit number.
- Not all Belgian (author-)publishers actually mention the legal deposit number. According to a search in the KBR-catalogue, only 72% of the works published in Belgium since 2000 mention the required number.
- Even when Belgian publications do mention the legal deposit number, very often in library or commercial catalogues the deposit number is omitted since it is primarily of internal use to KBR.

2. The International Standard Book Number or ISBN

Another self-evident identifier to look at, is the International Standard Book Number (ISBN), since the prefix element (978 or 979) is always followed by a registration group element (composed of 1 to 5 digits) that identifies the particular country, geographical region, or language area participating in the ISBN system.

Since Belgium has a very complex publishing landscape, there is not one specific registration group element for Belgian publications. In principle, this is the syntax:

- for publications in Dutch: 978–90 or 978–94
- for publications in French: 978–2 or 979–10
- for publications in German: 978–3
- for publications in other languages: various prefixes

In reality, unfortunately, even those principles are not strictly followed. According to the factsheet 2019 from Meta4Books,⁵ only 65% of the ISBN numbers assigned to publishers in Flanders and Brussels were written in Dutch.

An advanced search in the catalogue of KBR confirms that so-called Dutch, French or German publications are not always written in Dutch, French or German (see table 1).

(4) Royal Order of December 31, 1965, article 8 (*Belgisch Staatsblad/Moniteur belge* of January 19, 1966).

(5) Meta4Books, “2019 Boekenbank Factsheet”, based on data from Flemish and Brussels publishers contained in the database called ‘Boekenbank’, posted January 29, 2020, <https://www.meta4books.be/nieuws/boekenbank-2019-een-overzicht>.

ISBN begins with	Total amount	Classified based on language of publication				
		dut	fre	ger	eng	other
978-90 or 90 or 978-94 or 94	245,939	189,729 78%	21,163 9%	2,105 1%	30,639 13%	2,303 1%
978-2 or 2 or 979-10	188,150	4,988 3%	173,845 93%	995 1%	5,740 3%	2,582 1%
978-3 or 3	44,454	205 0%	1,830 4%	31,155 70%	9,561 22%	1,703 4%

Source: KBR-catalogue, May 28, 2020

Table 1. Correspondence between the ISBN registration group element and the language of the publication

In an e-mail message on January 31, 2020, Nick Woods, the Operations Manager of the International ISBN Agency, confirmed to us:

Although the ISBN allocations were historically divided along language lines, that is not true any longer. It is more precise to say that 978-2 or 979-10 are given to publishers who receive their allocations from the France ISBN Agency (AFNIL). Those publishers must be based in France, or Belgium, but they can then assign their ISBNs to books written in any language. The same is true of the other prefixes.

In conclusion, the registration group element does not solely allow us to identify a publication as Belgian since it only refers to the so-called ‘National ISBN agencies’ that assigned a (set of) ISBN.

In addition, neither of the officially recognised agencies are located in Belgium. This results in Belgian publishers having three possible ISBN agencies to turn to, according to the specific part of Belgium where they are located, based on the language of that area, and they are all situated abroad:

- Bureau ISBN by CB (Culemborg, Netherlands) for the ‘Vlaamse Gemeenschap’, who – admittedly – subcontracted Meta4Books (Antwerp, Belgium),
- AFNIL (Paris, France) for the ‘Fédération Wallonie-Bruxelles’,
- ISBN-Agentur (Frankfurt am Main, Germany) for the ‘Deutschsprachige Gemeinschaft’.

The lack of a specific registration group element for Belgium makes it impossible for public cultural heritage institutions or even federal, regional or local governments to distinguish Belgian numbers within the vast amount of international standard numbers attributed on a daily basis.

Furthermore, we have to bear in mind that not all publications subject to legal deposit have an ISBN. According to a search in the KBR catalogue on May 25, 2020, 41% of the monographs in the collection ‘Bibliography of Belgium’ did not apply for an ISBN. In other words, the ISBN does not suffice to recognise all Belgian publications that are deemed to be deposited.

Another difficulty consists in the fact that the International Standard Book Number (ISBN) is primarily meant to identify monographic or non-recurring publications, but in

practice it is also used to designate individual issues of continuing resources. Those periodicals – in their entirety – are identified by an International Standard Serial Number (ISSN). In libraries they only receive one bibliographic record, that does not always mention the ISBNs of every separate number. So when checking the coverage by means of the ISBN number, one needs to distinguish between continuing resources and monographs: for the latter one can use the ISBN whereas for serials one may need to search by serial title. Otherwise, if one searches for a specific ISBN, the catalogue may return zero search results, although it does belong to your collection as an issue of a serial string.

A last troublesome aspect is that distributors sometimes (ab)use the International Standard Book Number for types of material that are not eligible for ISBN, such as “Printed or digital materials that are intended for marketing or promotional purposes only such as advertising matter, widgets and the like.”⁶ According to the “2019 Boekenbank factsheet” published by Meta4Books, 3% of the 13,855 ISBNs were strangely enough assigned to non-books.⁷ The year before, in 2018, the percentage of non-books was even higher: no less than 9% or almost one ISBN in ten.⁸ Those non-books need to be eliminated from the total overview of publications subject to legal deposit.

3. The country of publication

A third field of bibliographic data that can be taken into account, is the country of publication. If the work is edited in Belgium, then the deposit is obligatory.

Nevertheless, this criterion does not cover the entire deposit collection because – as pointed out above –, Belgian deposit law also concerns works that are published abroad, but written by Belgian authors, domiciled in Belgium.

An advanced search in the catalogue of KBR on May 28, 2020 teaches us that the Agency of Bibliographic Information specified Belgium as country of publication for 90% of all the documents that received the shelf marks ‘BB...’ (monographs) or ‘(BB) BD...’ (periodicals) since 2010. In other words, about 10% of the Belgian deposit collection since 2010 is published abroad or in various places.

Since the bibliographic metadata do not offer conclusive criteria to identify the entire collection of publications that are subject to Belgian deposit law, there is a need to also examine the authority metadata that are linked to these documents.

(6) International ISBN Agency, *ISBN Users' Manual: International Edition*, Seventh Edition (London: International ISBN Agency, 2017), 10.

(7) Meta4Books, “2019 Boekenbank Factsheet.”

(8) Meta4Books, “2018 Boekenbank Factsheet.” Posted Januari 10, 2019, <https://www.meta4books.be/nieuws/boekenbank-cijfers-dit-was-2018>.

In search of ‘Belgian’ authority metadata

1. Published by a Belgian Publisher

If a work is published by a Belgian publisher and therefore published in Belgium, then it is subject to Belgian deposit law. This criterion in fact corresponds with the ‘country of publication’ of a document and presents the same gap: it does not include the work of Belgian authors domiciled in Belgium and published abroad.

Given the institution of the Belgian deposit law, KBR keeps a register of all organisations that regularly or occasionally publish a work and each of those ‘publishers’ is required to apply for a publisher number,⁹ which is one of the components of the legal deposit number. The main problem with this procedure is that it depends on the initiative of the publisher himself. When publishers ignore this legal obligation, then they will not automatically show up on the radar of KBR. It is necessary to actively search for new publishers, using the directories of publishers’ associations, the Global Register of Publishers of the International ISBN Agency or data from national ISBN agencies, the Crossroads Bank for Enterprises, etcetera.

One of the difficulties KBR encounters in administering and managing the Belgian register of publishers, is not only the volatile publishing sector but also the different ways of identifying publishers and their imprints: in Flanders the distribution platform Boekenbank uses a proper code (‘fondscode’), whereas in Wallonia the book professionals use the ‘Global Location Number’ (GLN), as recommended by the French ‘Commission de Liaison Interprofessionnelle du Livre’ (CLIL). One common standard identifier would be useful.

There is also the problematic case of self-publishing companies, such as Le Livre en papier, Beefcake Publishing, Create & Shop My Books, Barns & Noble Press, for example. According to the deposit law,¹⁰ a ‘publisher’ is understood as a natural or legal person that at its expense publishes or makes someone publish a work. Therefore, the responsibility to deposit lies with the author who funds the publication, but the latter is not always aware of that obligation, and particularly for self-publication models.

2. Created by a Belgian Author, Domiciled in Belgium

That brings us to the last criterion regarding the Belgian legal deposit law: is the work written by a Belgian author domiciled in Belgium¹¹ and published abroad? Since information about one’s domicile belongs to the private sphere, it is unlikely to obtain that type of information through an internet search. What KBR luckily does have, are lists of authors

(9) Royal Order of December 31, 1965, article 5 (*Belgisch Staatsblad/Moniteur belge* of January 19, 1966).

(10) Law of April 8, 1965, article 4 (*Belgisch Staatsblad/Moniteur belge* of June, 18, 1965).

(11) The condition of Belgian nationality will cease to apply as soon as the Law of July 8, 2018, article 3 (*Belgisch Staatsblad/Moniteur belge* of July 20, 2018, second edition) will enter into force by a forthcoming Royal Order. From that date the only condition will be the domicile in Belgium.

that qualify for grants, provided by the Flemish and the French-speaking communities. This serves to identify a portion of applicable authors, that may have slipped through the net. Apart from that, in practice, it is very difficult to apply the criterion of domicile. Which is why KBR is investigating the possibility to cooperate with the Home Affairs FPS, who keeps a National Register.

The Importance of Metadata and the FAIR-Principle

Given these obvious challenges, there is a need for generating a more comprehensive and unequivocal set of characteristics to define Belgian publications. At KBR we have integrated the use of FAIR data principles, to further enrich and enhance the quality of metadata. As LIBER and Ivanović point out,¹² quality metadata should be:

- Findable: data and supplementary materials have sufficiently rich metadata and a unique and persistent identifier;
- Accessible: metadata and data are understandable to humans and machines. Data is deposited in a trusted repository;
- Interoperable: metadata use a formal, accessible, shared, and broadly applicable language for knowledge representation;
- Reusable: data and collections have a clear usage licenses and provide accurate information on provenance.

Therefore, at KBR we are enriching our authority data with – *inter alia* – the author’s country of birth or residence and with the ISNI – International Standard Name Identifier (ISO 27729). That number helps us “to resolve the problem of name ambiguity” and offers “a bridge identifier across multiple domains” and “a critical component in Linked Data and Semantic Web applications.”¹³

What Sources Offer Reliable and Comprehensive Data or Information?

Once we have established which publications we need to consider and how we can recognise them, the next question is where to count the number of Belgian publications that are subject to legal deposit. This brings us to the major challenge when measuring the coverage of the legal deposit collection preserved at KBR.

(12) LIBER, “Implementing FAIR Data Principles: The Role of Libraries.” Factsheet posted December 8, 2017, <https://libereurope.eu/blog/2017/12/08/implementing-fair-data-principles-role-libraries/>.

Dragan Ivanović *et al.*, “FAIRness of Repositories & Their Data: A Report from LIBER’s Research Data Management Working Group” (2019), <https://doi.org/10.5281/zenodo.3251593>.

(13) ISNI International Agency, “International Standard Name Identifier (ISO 27729),” <http://www.isni.org/> (accessed January 24, 2020).

Due to the fragmentation and dispersion of the information about Belgian publications, there is no ready-made exhaustive list available to count the total number of publications subject to legal deposit. However, what we can do is generate an overview ourselves by comparing our legal deposit collection with as many trustworthy bibliographies of ‘Belgian’ publications as possible and by mapping all *lacunae* or missing documents.

Where can we find accurate data on Belgian publications or authorities?

First of all, the International ISBN Agency offers valuable information on the publishers’ ISBN prefixes and countries. On the other hand, and although their availability “is essential for both selling and cataloguing books”, registers of ISBNs and accompanying metadata held by national ISBN agencies are less accessible, because “customers may be charged a fee by ISBN registration agencies and publishers of bibliographic databases to access this information.”¹⁴ The International ISBN Agency clearly stipulates that “any such fees shall be on a cost-recovery basis,”¹⁵ but in reality metadata have become big business and distribution platforms who also fulfill the role of local ISBN Agency capitalise not only on the books themselves but also on the information about these titles. For new releases, distributing platforms indeed offer accurate bibliographic data because publishers have high commercial interest in providing them with up-to-date and correct information, but in a world of digital transformation data come at a price and their (re-)use requires a license agreement.

Luckily, for existing titles, one can find quality data on Belgian publications in the ‘Union Catalogue of Belgian Libraries’ (in short ‘UniCat’) on www.unicat.be, which as of January 2016 offers an integrated catalogue of the scientific and special libraries in Belgium, including KBR.

Since the Belgian publishing landscape often crosses our national borders, the catalogues and open data dumps of neighbouring national libraries, in particular the Koninklijke Bibliotheek in the Netherlands, the Bibliothèque nationale de France, the Bibliothèque nationale du Luxembourg and the Deutsche Nationalbibliothek, also constitute very reliable sources of information to KBR.

Fourthly, literary archives such as ‘Archives et Musée de la littérature’ or the ‘Letterenhuis’ have specialised information on Belgian authors, and for authorities in general one can consult the database of the ISNI International Agency or the Virtual International Authority File.

Translations of Belgian authors’ works may be found in a database from the Dutch foundation of literature, in the Digital Library and Bibliography of Literature in Translation from the University of Vienna or in the ‘Index translationum’ from UNESCO.

Finally, publications without ISBN may be recorded in Open Grey, a system for information on grey literature in Europe.

(14) International ISBN Agency, 16–7.

(15) International ISBN Agency, 23.

When should we Count the Amount of Deposited Titles?

If we want to measure the coverage of the legal deposit collection preserved at KBR, then it is also important to choose the right moment to count the number of deposited works published in a certain year. Although the Belgian deposit law determines a period of fifteen days for a Belgian publisher to deposit a publication, and a period of two months for a Belgian author with domicile in Belgium and published abroad, KBR's experience suggests otherwise. As table 2 shows, there is a delay of around a year from publication to entrance in the Bibliography of Belgium collection. Of all the titles deposited at KBR, approximately 85–90% are collected and processed within two years, counting from their publication. Thus, although it is wise to highlight the deposit deadline and quickly claim missing titles, to ensure a reliable measurement of coverage it is recommended to wait at least one year after the year of publication to assess the number of items deposited.

Year of publication	Total BB	BB 2015	BB 2016	BB 2017	BB 2018	BB 2019
2015	15,132	6,578	5,986	1,453	553	146
		43%	40%	10%	4%	1%
2016	14,241		7,817	4,661	1,056	270
			55%	33%	7%	2%
2017	15,105			7,298	6,359	873
				48%	42%	6%
2018	14,215				5,920	7,749
					42%	55%
2019	11,261					8,499
						75%

Source: KBR-catalogue, May 28, 2020

Table 2. Time frame from publication to entrance in the KBR-catalogue

The delay between the year of publication, on the one hand, and the entrance in our collections available to the public, on the other hand, is due to the sum of two time frames:

- an external time frame: the time a publisher or an author takes to deposit, which too often exceeds the deposit deadline defined by law.
- an internal processing time in five stages:
 1. the reception of the deposit by the Secretariat
 2. the creation of the bibliographic record by the Agency for Bibliographic Information
 3. the labelling of each copy of a certain publication with its shelf mark
 4. the quality control by another team of the same Agency
 5. the transfer to the storeroom and/or reading room, making it available to the users

Clearly, KBR aims at increasing the percentage of available publications within the year of publication, and efforts to reduce both the external term by better informing the depositors and the internal processing time by optimising the workflow. *Infra*, we will return to this.

How should we Count the Amount of Deposited Titles?

Another aspect of establishing a reliable measuring method for the degree of coverage concerns the manner of counting. The Secretariat manually counts the number of deposited items each working day.

A disadvantage of that manual count is that it is not repeated by another colleague nor reproducible: once the items are passed on to the Agency for Bibliographic Information and later integrated in our collections, we can no longer reproduce the count of incoming deposits.

In addition to the manual count, we have recently introduced a digital registration of the incoming deposits. Thanks to the introduction of our current Library Management System (LMS) and to the development of an online declaration and e-Deposit platform, we are now able to automatically count the deposits that arrive through the deposit platform. Once the platform is duly promoted and the use established, that digital count allows KBR to corroborate or adjust the findings of the manual count. The reproducibility will ensure a higher degree of reliability. Moreover, each year we also compare the number of deposited titles with the number of newly created Bibliography of Belgium records to check if the figures add up.

Based on our findings above, we conclude that for now any scientific attempt to measure the coverage of the legal deposit collection preserved at KBR still needs more preparation due to the fragmentation and dispersion of information on the publishing landscape in Belgium. However, that should not keep us from examining how other countries tackle the question with the purpose of identifying best practices.

IN SEARCH OF BEST PRACTICES IN OTHER COUNTRIES

The first thing to notice is that remarkably little has been published on measuring the coverage of a national collection. In Europe, only the national libraries of the Netherlands and of Switzerland have published studies on that topic. Worldwide as well, very few publications have been dedicated to this subject. The most interesting ones are the PhD thesis of Penzhorn (2007) on the legal deposit system in South Africa, the ISO standard for national libraries (2009/2019) and an article on the level of compliance in Pakistan (2015). In what follows, we will start by presenting a literature review and afterwards gather our reflections and learnings.

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1983/1996/2005: the Koninklijke Bibliotheek (KB) in the Netherlands

A true pioneer in measuring the coverage of their deposit collection is the Koninklijke Bibliotheek (KB), the National Library of the Netherlands.

In 1983, 1996 and 2005,¹⁶ the KB had already conducted three thorough studies to assess the completeness of the Deposit Library of Dutch Publications, “consisting of all the Dutch publications issued by recognised publishers as well as a large portion of all Dutch publications issued outside recognised channels – so-called grey literature.”¹⁷

The complete report on the study was published by Henk Voorbij in September 2005 and partially corrected in December 2009 with regards to the periodicals. As table 3 shows, four categories of publications were distinguished to determine the coverage.

Category	Sources	Coverage 1993 Study 1996	Coverage 2003 Study 2005
1. Books with ISBN	ISBN register (CB)	96.6%	95.0%
	Dutch Central Catalog (PICA OCLC) ¹⁸	–	93.5%
2. Books without ISBN	Dutch Central Catalog (PICA OCLC)	68.7% – 71.9%	69.1% – 71.5%
3. Academic writings – thesis – lectures	Research Agenda's and annual reports from universities	99.0%	95.5% – 96.5%
		87.5%	64.6% – 78.3%
4. Periodicals	Handboek van de Nederlandse pers en publiciteit	93.0%	94.0% – 94.8%
	Dutch Central Catalog (PICA OCLC)	80.9% – 87.4%	81.5% – 87.1%

Table 3. Overview of coverage in 1993 versus coverage in 2003¹⁹

To KBR, the most important lessons from the frequently cited study of 2005 are not the coverage statistics themselves, but rather the method applied and the conclusions drawn from it. KB chose the method of list checking and selected two bibliographic sources as checklists: “the Dutch ISBN database, owned by the national ISBN centre (which is part of the Centraal Boekhuis, a main national distribution centre of books) and the Pica database, owned by OCLC/Pica.”²⁰ For the books with or without ISBN, KB took a sample of 10% and checked whether the titles were held or not held by the Deposit Library. Next, KB examined whether the titles that were not held had to be regarded as real *lacunae*. Finally,

(16) Henk Jan van Beek, *De aanwezigheid van publikaties bij het Depot van Nederlandse Publikaties* (Den Haag: Bibliotheekraad, 1983).

Henk Voorbij and Pieter Douma, *Hoe volledig is het Depot: een onderzoek naar de volledigheid van de collectie van het Depot van Nederlandse publicaties* (Den Haag: Koninklijke Bibliotheek, 1996).

Henk Voorbij, “Tien jaar later: een herhalingsonderzoek naar de volledigheid van het Depot van Nederlandse Publicaties” (report received via e-mail January 14, 2020, Koninklijke Bibliotheek, September 2005, correction December 2009).

(17) KB, Nationale Bibliotheek van Nederland, KB, “Information about the Dutch Bibliography,” <https://www.kb.nl/en/organisation/for-publishers/information-about-the-dutch-bibliography> (accessed May 12, 2020).

(18) In Dutch, the central catalog is called ‘Gemeenschappelijk Geautomatiseerd Catalogiseersysteem (GGC).’ See also: <https://www.oclc.org/nl/ggc.html>.

(19) Henk Voorbij, “Tien jaar later: een herhalingsonderzoek naar de volledigheid van het Depot van Nederlandse Publicaties,” 4.

(20) Henk Voorbij and Adriaan Lemmen, “Examining the Coverage of a National Deposit Library: A Case Study in the Netherlands,” *Libri* 56, no. 3 (September 2006): 192, <https://doi.org/10.1515/LIBR.2006.191>.

a failure analysis was performed to characterise the identified *lacunae* and to draw conclusions – with due caution:

Definitive statements cannot be made, for three reasons: uncertainties about the appropriateness of the checklists, difficulties in assessing the relevance of missing titles, and the possibility that coverage increases over time due to late arrival of publications. Failure analysis showed that lacunae were caused by occasional failures from publishers rather than a structural lack of cooperation. Increasing coverage therefore would require list checking at a large scale on a yearly basis.²¹

In addition to conducting thorough decennial studies, as far as we know, the KB is also the only national deposit library in the world whose annual reports inform each year on the degree of coverage of their national collection (see table 4).

Year of publication	Coverage	Source: Annual reports KB ²²
2010	c. 97%	Jaarverslag 2011, p. 15, 19
2011	c. 97%	Jaarverslag 2012, p. 17, 21
2012	c. 97%	Jaarverslag 2013, p. 18, 22
2013	c. 97%	Jaarverslag 2014, p. 20, 24
2014	68.5%	Jaarverslag 2015, p. 39
	69.3%	Jaarverslag 2016, p. 42
2015	64.5%	Jaarverslag 2016, p. 42
	64.5%	Jaarverslag 2017, p. 77
2016	64.5%	Jaarverslag 2018, p. 82

Table 4. Coverage of the Deposit Library of Dutch Publications (2010–2016)

In comparison to the coverages of 1993 and 2003, the estimated coverages of 97% for the years 2010 to 2013 seem high, whereas the rates from 2014 on are significantly lower. In an e-mail exchange on January 13, 2020, Adriaan Lemmen, Account Manager Collections at KB, explained to us that in transition from print to digital KB has changed its method to estimate the coverage rate. Until 2013 the coverage was determined at the publishers' level. Based on the member list of the 'Mediafederatie', an association of publishers and media companies which represents 90% of the Dutch publishing sector, the KB had established a list of approximately 400 large, medium-sized and small publishers. Next, the administration of the '*Depot van Nederlandse Publicaties (en e-Depot)*' verified if these publishers deposited their publications with regularity, which resulted in a coverage rate of regularly depositing publishers. As reflected in table 4, from 2014 on, the coverage rate is henceforth estimated at titles' level and two years after the year of publication, but without any further analysis on the titles that are not held or that may well be present at KB in a digital version, so possibly the actual coverage might be higher.

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(21) Voorbij and Lemmen, 198.

(22) KB, Nationale Bibliotheek van Nederland, *Jaarverslag 2011 – Jaarverslag 2018* (Den Haag: KB, 2012–2019), <https://www.kb.nl/organisatie/organisatie-en-beleid/jaarverslagen>.

2007–2008: The National Library of South African (NLSA)

Another most interesting study is the one of Cecilia Elizabeth Penzhorn (2007)²³ regarding the implementation, monitoring and management of legal deposit in South Africa. The empirical study was conducted in two stages:

1. semi-structured qualitative interviews with publishers and the legal deposit libraries to explore the attitudes, opinions and behaviours;
2. a feasibility study to determine the state of compliance with legal deposit in the country.

The outcomes were used to identify gaps and weaknesses in the legal deposit system, and to make recommendations for the improvement of procedures, methods and services.

The feasibility study, which checked ISBN lists, book reviews in newspapers, and books on the national database SACat against records of publications received as legal deposit, showed that measuring compliance with legal deposit is possible in South Africa and concluded that for the year 2001:²⁴

- Medium-sized publishers showed the highest compliance figure of 76%.
- Large publishers followed with a very similar average of 73%.
- Smaller (commercial) publishers lagged behind quite significantly with a compliance figure of 51%. Small/private/once-off publishers only reached an average of 29%. When this latter figure is included in the overall calculation, the average compliance figure for small publishers comes to 40%.

A survey using questionnaires from Noepe and Makhura (2008)²⁵ also aimed to assess the level of compliance with South Africa's Legal Deposit Act, 1997 by publishers. An electronic copy of the questionnaire was sent to both a sample of 30% of the publishers (n = 50), randomly selected from the online directory of the Publisher's Association of South Africa, and all legal deposit centres (n = 6), with response rates of 70% for the publishers (n = 35) and 67% for the legal deposit centres (n = 4). The survey focused on the following areas:

- Awareness and implication of depositing materials in legal deposit centres
- Communication level between legal deposit centres and publishers
- Compliance with Legal Deposit Act
- Accessibility of legal deposit centres

Regarding the compliance, the results show that “the legislative requirements to submit a publication within 14 days of publication are not always adhered to.”²⁶

(23) Cecilia Elizabeth Penzhorn, “The implementation, monitoring and management of an effective legal deposit system for South Africa” (PhD thesis, University of Pretoria, 2007), <http://hdl.handle.net/2263/25088>.

(24) Penzhorn, 178.

(25) Mpho Ngoepe and Moss Makhura, “Assessing the level of compliance with regard to the Legal Deposit Act: implications on access to South Africa's published heritage,” *Mousaion* 26, no. 2 (2008): 98–114, <https://www.researchgate.net/publication/274953906>.

(26) Ngoepe and Makhura, 108, 112.

- ten (29%) of the respondents deposited new publications once a year;
- six (17%) once in every six months;
- twelve (32%) publishers either deposited whenever there was a new publication or when requested by places of legal deposit;
- seven (20%) did not deposit publications to legal deposit centres at all.

Since these rates of compliance are based on answers from publishers themselves who, moreover, took the effort to fill in and return the questionnaire, it may not surprise that, all figures added up, the total compliance comes to 28 out of 35 or 80%, and thus even exceeds the highest compliance figure of 76% shown by medium-sized publishers in the evidence-based feasibility study of Penzhorn.

As to the methodology, both Penzhorn and Ngoepe & Makhura used purposive sampling to focus on commercial publishers as members of the Publishers' Association of South Africa, but unlike the latter, Penzhorn used quota sampling, in addition, to make sure that the sample reflected the proportions of the overall population as accurately as possible. Thereafter, Penzhorn distinguished the same categories of large, medium and small publishers while analysing the results of the feasibility study. It is important to make that distinction because the level of compliance often differs significantly depending on the size of the publisher.

2007/2014: The National Diet Library of Japan (NDL)

In 2007 the National Diet Library of Japan (NDL) tested the utilisation of draft ISO performance indicators, including an indicator for building the national collection. For books published in 2005, Akiko Hashizume²⁷ reported the following degrees of coverages:

- Government Publications: 89.8%
- Private Publications: 88.0%

Although he did not elaborate on the methodology of the trail evaluation, Hashizume did acknowledge that especially the selection of the bibliographic sources caused problems²⁸ – as in Belgium:

'Percentage of national publications acquired by the National Library' is difficult to calculate [...] because we had to start with determining which bibliographies or catalogues should be chosen in order to count the number of national publications as the denominator.

The study was repeated in 2014, but evaluation details are only available in Japanese.

(27) Akiko Hashizume, "Utilization of indicators in the National Diet Library (NDL): Efforts for Activity Evaluation" (paper presented at the World Library and Information Congress, 74th IFLA General Conference and Council, Québec, Canada, August 10–14, 2008), <http://archive.ifa.org/IV/ifla74/papers/160-Hashizume-en.pdf>, 4.

(28) Hashizume, 12.

2009: The National Library of Korea

In 2009, a study was undertaken to determine the coverage of the book collection of the National Library of Korea. The English abstract of an article in Korean summarises the method and findings as follows:²⁹

Bibliographies for the year 2007 and 2008 publications are obtained from the Kyobo Book Centre and sampled 10% systematically to be used as checklists. Coverage was determined by searching the citations against the OPAC of the National Library of Korea. Results indicate 92.25% of coverage for the books published in 2008, 78.10% coverage for the books published in 2007 [...] Reasons for the unpossessed books, such as delay of deposit and publisher characteristics, are identified. Recommendations for the coverage improvements and future research are suggested.

2009/2019: ISO Performance Indicators for National Libraries and Building Collections

Also in 2009, the International Organization for Standardization published a standard for measuring performance of national libraries: *ISO/TR 28118:2009 Information and documentation – Performance indicators for national libraries*.³⁰

To assess one of the core functions of a national library, building the national collection, and in particular, the completeness of the national collection, the standard of 2009 proposed the indicator ‘Percentage of national publications acquired by the national library’.

In 2019, a new standard, named ISO 21248:2019. *Information and documentation – Quality assessment for national libraries*, added impact assessment to the performance measurement, but resumed the same performance indicator and measuring methods to assess to what degree the library covers the national production.

To calculate the percentage of national publications acquired by the national library, ISO 21248:2019 recommends to focus on a particular year of publication and to conduct the evaluation up to three years after that publication year. Three different methods are proposed, depending on the kind of publications, but they all use a formula of the type $(A/B) \times 100$ where A is the number of publications actually acquired by the national library and B the total number of publications listed in a particular source or checklist:³¹

- A.1.1.1.4.2 To assess the coverage of commercial publications: count the number of titles listed in all publishers’ catalogues or in a central publishers’ database and compare these to the total of these publications acquired by the national library. If that is not feasible, a random sample of publishers’ catalogues may be taken.

(29) Hyeran *et al.*, “National Collection Comprehensive Measurement Study: On Sales Books,” *Journal of Information Management*, 26, no. 4 (2009): 187–200, <https://doi.org/10.3743/KOSIM.2009.26.4.187>.

(30) International Organization for Standardization. *ISO/TR 28118:2009. Information and Documentation – Performance Indicators for National Libraries* (Geneva: ISO, 2009).

(31) International Organization for Standardization. *ISO 21248:2019. Information and documentation – Quality assessment for national libraries* (Geneva: ISO, 2019), Annex A, 50-52.

- A.1.1.1.4.3 To assess the coverage of non-commercial publications: compare a representative sample of catalogues and bibliographies of any given year to the number of titles in the sample that have been acquired by the national library.
- A.1.1.1.4.4 To assess the coverage of both commercial and non-commercial publications: count the number of titles in a random sample of publications (with and without an ISBN or ISSN) listed in the national union catalogue and published in any given year and compare it to the number of these that have been acquired by the library.

As we will comment below, since 2009 only a few libraries have applied these methods.

2011/2019: The National Library of Nigeria (NLN)

Meanwhile, in Nigeria, a study from Nwagwu and Fabunmi³² “adopted a sample survey design” to question 799 academic authors by mail and 25 commercial publishers by a personally administered questionnaire about their awareness of and compliance with the Nigerian national legal deposit, and it also included “a physical examination of records of legal deposit in the library” for the period 1990–2007.

Among the respondents only 24.7% of authors and 78.0% of publishers reported complying with legal deposit. By examining the records of deposit in the National Library, it was established that during the period 1990–2007 the library received 105,770 items, with a peak of deposit in 1991 (26.57%) and the lowest percentage of deposits in 1995 (1.37%). However, these percentages only inform about the fluctuations in deposits throughout the years; they give no indication at all about the degree of coverage of the legal deposit collection. In other words, the levels of compliance reported by the respondents are not cross-checked with the empirical research.

Another recent assessment of legal depository practices in Nigeria is not based on objective data analysis or quantitative research either. The study of Akidi and Omekwu³³ adopted a “descriptive survey design”, using a structured questionnaire, an observation checklist, and documentary evidence, in order to collect data among a sample of 22% of the staff of the National Library of Nigeria. Although staff may very well have a good impression of legal depository practices, their answers will inevitably show a bias since they are highly involved.

(32) Williams Ezinwa Nwagwu and Oluwatobi M. Fabunmi, “Awareness and pattern of compliance of authors and publishers in Nigeria with the Nigerian national legal deposit,” *The Canadian Journal of Information and Library Science – La Revue canadienne des sciences de l’information et de bibliothéconomie* 35, no. 2 (2011): 123–46, <https://doi.org/10.1353/ils.2011.0011>.

(33) Juliana O. Akidi and Charles O. Omekwu, “Assessment of legal depository practices of the National Library of Nigeria and compliance of publishers and authors with legal deposit obligations,” *Library Philosophy and Practice* (July 2019): 8, <https://search.proquest.com/docview/2300553901?accountid=9769>.

Moreover, the conclusion of the study excels in vagueness regarding the coverage of the national collection and bibliography:

*The study [...] established that a lacuna exists in comprehensiveness of coverage of legal deposit collected, which consequently affects the comprehensive coverage of resources listed in the National Bibliography of Nigeria.*³⁴

2012/2014/...: The Swiss National Library (NL)

In 2012 the Swiss National Library (NL) conducted a study on its coverage of print monographs published in Switzerland in 2010. As Patrice Landry reports, “the study tested the list checking method developed at the Koninklijke Bibliotheek (KB) in the Netherlands to evaluate the results of the list produced by Swissbib, the Swiss union catalogue” and “found that the rate of coverage for commercial publications (with an ISBN) was 97.05% and that of grey literature (without an ISBN) was 93.96%.”³⁵

It is very interesting to learn why the NL did not opt for the methods proposed by the ISO/TR 28118:2009, after reviewing and testing them.³⁶

– A1.1.4.2 (= A.1.1.1.4.2 in ISO 21248:2019)

Three problems dissuaded the NL from comparing a list of commercial publications during the previous three years with the catalogue of the NL: (1) the lack of a central publishers’ database, (2) difficult access to all publishers’ catalogues (either printed or electronic) and (3) labour intensive and probably incomplete listing of publications from institutions, associations and organisations which are involved in commercial publishing activities.

As to the sample of publishers’ catalogues that could be taken, the technique did not specify the size of the sample nor the distribution according to type of publishers, languages and geographic regions. In the context of Switzerland, with its four national languages and English and the diversity of publishers, Landry considered the sampling method would not yield representative results regarding the coverage.

– A1.1.4.3 (= A.1.1.1.4.3 in ISO 21248:2019)

The sample method proposed for calculating the coverage of non-commercial publications raised similar concerns as for commercial publications. In addition, Landry was not convinced of the practicality and efficiency of locating catalogues of non-commercial, usually “grey literature” type of publications.

– A1.1.4.4 (= A.1.1.1.4.4 in ISO 21248:2019)

Although the NL receives on a monthly basis a list of recent attribution of ISBNs given to individuals and publishers, the use of the Swiss national ISBN listings was not retained either since the ISBN list lacked precise information of ISBN batch numbers.

(34) Akidi and Omekwu, 18.

(35) Patrice Landry, “Coverage of Print Monographs at the Swiss National Library: A Preliminary Study,” *Libri* 64, no. 2 (2014): 124, <https://doi.org/10.1515/libri-2014-0010>.

(36) Landry, 127–28.

Although the results are not published any more, the Swiss National Library (NL) continues to assess the coverage, at least once every four year. In 2012 the coverage of print monographs had increased compared to 2010 and the study of 2014 went more smoothly and quickly, according to Landry's report received by e-mail on May 25, 2020.

2015: The Austrian National Library (ONB)

In an intellectual capital report published in 2016, the Österreichische Nationalbibliothek (ONB) also referred to ISO/TR 28118:2009 and mentioned two percentages for the coverage of the Austrian national collection: 91,3% in 2010 and 97,7% in 2015.³⁷ Apparently, in 2015, the ONB did apply the first method of the ISO standard: they took a sample of 26 publishers from 198 Austrian art and culture publishers and checked their titles in the catalogue of the Austrian National Library, but the report does not mention any further details about the study.

2015: The National Library of Pakistan (NLP)

In Pakistan, as well, the feasibility study of Iqbal, Qutab and Soroya used the ISO/TR 28118:2009 method of list checking and the sampling method (A1.1.4.2) to measure the coverage of commercial publications in the National Library of Pakistan during a period of four years, from 2010 to 2013:

Convenience sampling³⁸ was used to select 200 commercial publishers from Lahore and Rawalpindi in equal proportion. [...] Publishers were categorized as per their annual publications: smaller publishers with less than 50 publications, medium with less than 100 and large publishers publishing more than 100 titles. Publications printed during 2010–2013 were examined to determine if they had been received under the copyright ordinance by the National Library of Pakistan. More recent years were avoided due to delayed depositing experience reported by the depository library. Published catalogues of the selected 200 publishers from the years 2010–13 were collected through personal visits in order to prepare a true representative and authentic list of publications, in the absence of a union database or information bank of the publishers and online catalogues of publication in Pakistan.³⁹

(37) Österreichische Nationalbibliothek, *Wissensbilanz 2015* (Wien: Generaldirektion der Österreichische Nationalbibliothek, 2016), https://www.onb.ac.at/fileadmin/user_upload/I_Sitemap/Ueber_Uns/Jahresberichte/Wissensbilanz_2015_Kern_Web_klein.pdf, 38.

(38) Convenience sampling is one of the non-probability sampling techniques “where the units that are selected for inclusion in the sample are the easiest to access.” See Never Mujere, “Sampling in research,” in *Mixed Methods Research for Improved Scientific Study*, edited by Baran, Mette, and Janice Jones (Hershey, PA: Information Science Reference, an imprint of IGI Global, 2016), 115.

(39) Sohail Iqbal, Saima Qutab, and Muhammad Shahid Soroya, “Measuring Level of Compliance of Publishers with the Legal Deposit of Pakistan: An Exploration,” *Libri* 65, no. 4 (2015): 252–53, <https://doi.org/10.1515/libri-2015-0067>.

The study exposed an alarming level of compliance in Pakistan, where legal deposit was adopted in 1962 and implemented since 1968:

*It revealed a compliance rate of 18% to 30% which is very low [...] The compliance of larger publishers is better as compared to medium and smaller publishers. The compliance rate of English books is comparatively better but Urdu books and especially Islamic books' compliance rate is not up to the mark.*⁴⁰

INSIGHTS AND RECOMMENDATIONS FOR A FUTURE MEASUREMENT

Based on our own findings, on the lessons of other national libraries, and on the standard ISO 21248:2019, we recommend the following insights in order to measure the coverage of the legal deposit collection preserved at KBR.

‘Think big, **start small**, scale fast’ is a guiding principle in digital transformation that might also be applied to examine the coverage. In fact, at KBR a very basic, small scaled experiment has been most useful to identify the obstacles to overcome and to highlight the major points of attention. As advised by the ISO standard, the calculation should indeed “focus on a particular year of publication (...), and the evaluation should be conducted up to three years after that publication year.”⁴¹ For a future measurement, we also recommend beginning by measuring the coverage of the easiest category of publications, namely print monographs with ISBN number, and gradually add other types of publications. Step by step.

Given the composition of Belgium, with its three language Communities, it is essential to ensure that – as in Switzerland– the study yields **representative results** regarding the coverage of the legal deposit collection **for all three languages**.

Examining the coverage can be done at the level of publishers or **at the level of titles**. As illustrated by comparing two South-African studies, obviously, the method of list checking at the level of titles will offer by far a more objective and more representative picture of the actual reality than a survey among a random sample of publishers, authors, staff of deposit centres or a national library, ... who are all involved in the system and therefore inevitably biased.

Since KBR has the mission to collect and preserve *all* publications subject to Belgian legal deposit legislation, the **method of list checking** is indeed “the only appropriate method,”⁴² as stated by Henk Voorbij and Adriaan Lemmen.

A crucial factor that influences the reliability of the study concerns the choice of the checklists. Since a complete overview of Belgian publications does not exist, there is no other solution than to **compile a checklist or control database** ourselves by comparing the current legal deposit collection with as many trustworthy bibliographies of ‘Belgian’ publications

(40) Iqbal, Qutab and Soroya, 247.

(41) International Organization for Standardization. *ISO 21248:2019*, 51.

(42) Voorbij and Lemmen, 192.

as possible, and by mapping the gaps and systematically recording the missing documents. As recommended by Penzhorn,⁴³ it is important to combine various sources and crosscheck their data, for example: ISBN lists, CIP (Cataloguing-in-Publication) data, a national union catalogue/database, other resources in the general book trade, ...

Once the checklist offers an overview as complete as possible, it is necessary to narrow it down and **reduce it to relevant titles**, excluding all publications or even materials that after closer examination in fact are not subject to legal deposit, such as ephemeral publications or promotion material that nevertheless received an ISBN.

Also, the coverage of **serials** should be examined **separately** because, unlike monographs, periodicals (journals, yearbooks, annual reports,...) do not have an individual record in the catalogue for each issue, only one record for the title.

In what follows, we will focus on **non-serial** publications. Within the category of monographs, rather than follow the distinction made by ISO 21248:2019 between commercial and non-commercial publications, for practical reasons we prefer – like the KB of the Netherlands or the Swiss NL – to distinguish between publications **with ISBN** and publications **without ISBN**, because even non-commercial publications often carry an ISBN.

Although for the sake of feasibility other studies have used the sampling method (e.g. samples of 10%), it is recommended to **check the entire overview** of publications, or at least a lion's share of it. Thanks to modern information technology, the use of international standard identifiers, a digital library management system and digital checklists allow us to easily compare a vast amount of data.

The most accurate **search criterion** for the list checking is the **ISBN**, in both its 10-digits and 13-digits variant. In the complex case of Belgium we should search by several options to cover works published in all three language communities:

- Dutch: ISBN = 97890* or 97894* or 90* or 94*
- French: ISBN = 9782* or 97910* or 2*
- German: ISBN = 9783* or 3*

However, according to a search in our catalogue, 41% of the 'Bibliography of Belgium' monographs do not have an ISBN in their bibliographic record. For those publications **without ISBN**, the method of list checking will be far more time-consuming since searching **by title or by name** of the author or the publisher is less unequivocal.

Once the real lacunae are identified, a **failure analysis** may reveal what factors caused the gaps and, more importantly, help to take measures in order to **complete the collection**.

While analysing the results and reporting on levels of compliance it is important to **distinguish different categories of depositors** because the level of compliance may differ significantly depending on the size of the publisher (large, medium or small) or the type of depositor (professional publisher, occasional publisher or author). For example, although a

(43) Penzhorn, 193–95.

Belgian author who is domiciled in Belgium and published abroad is required to deposit his work at KBR, compliance with legal deposit by this category remains problematic.⁴⁴

HOW TO IMPROVE THE COVERAGE OF THE LEGAL DEPOSIT COLLECTION?

The path we have travelled to conceive a reliable measurement method actually has shown the road map to reaching our final goal: a 100% coverage of our legal deposit collection. What strategy is to be followed in order to enhance compliance with the legal deposit and to improve the coverage? Which objectives are to be set? What actions are to be undertaken?

Actualise and Clarify the Legal Deposit Legislation

First, we need to examine whether the legal deposit legislation is sufficiently up-to-date or even future proof.

As mentioned before, the legal deposit law has been modified to allow digital deposit and an e-deposit platform is already in operation, but the law does not come into force until a forthcoming Royal Order is published, so for the time being the deposit of digital publications still happens on a voluntary basis.

Belgium is no exception in that respect. The *2017 International e-Legal Deposit Survey* learns that “progress in electronic deposit legislation has been slow” and that “only 69% [of the respondents] have laws allowing for digital deposit.”⁴⁵

Therefore, “UNESCO PERSIST and IFLA have convened working groups to address the need for more international collaboration on digital preservation of cultural heritage content.”⁴⁶

The main challenges that the UNESCO PERSIST Content and Best Practices Working Group pointed out at a workshop held in 2017 are the following:⁴⁷

- the changing relationship between the physical and digital realities (many memory institutions do not yet have clear policies on digital preservation, even though they may have large digital collections, nor are up for the major digital challenges, such as large scale web archiving);
- the awareness of policy makers within governments that proper digital preservation is an essential element of the digital content lifecycle and needs active support;

(44) Frank Daelemans, “Het wettelijk depot in België.” *Archives et bibliothèques de Belgique – Archief- en bibliotheekwezen in België* LXXX, no. 1–4 (2009): 57.

(45) Frederick Zarndt *et al.*, “Results of the 2017 Survey of Electronic Legal Deposit Policies and Practices at National Libraries,” (report posted July 25, 2018), <https://www.ifla.org/node/61887>, 25.

(46) Zarndt *et al.*, 26

(47) Julia Brungs, Vera Marz and Marco de Niet, “Report of UNESCO PERSIST Content and Best Practices Workshop,” (held at the German National Library in Frankfurt am Main, Germany, February 23–24, 2017, posted on April 12, 2017), <https://unescopersist.files.wordpress.com/2017/04/persist-cbp-frankfurt-workshop-report.pdf>, 4–5.

- public awareness;
- setting up stronger collaborations with the ICT industry, especially the major players in global information infrastructures or services.

At KBR recommendations and an implementation plan are drawn up for the long-term preservation of digital documents. Moreover, a research project called PROMISE⁴⁸ (2017–2019) has outlined a Belgian strategy for web archiving and a subsequent project called BESOCIAL (2020–2022) will develop a sustainable social media archiving strategy for Belgium. Of course, for every extension of the notion ‘publication’, the legal deposit legislation will need to be adapted.

Secondly, it is necessary to verify if the formulation of the legal deposit legislation is SMART enough: specific, measurable, acceptable, realistic and time-bound.

Regarding the number of copies to be submitted, Belgian legislation law makes an important distinction between two types of publication: only one copy of periodical publications (journals, magazines, yearbooks, annual reports,...) is required for deposit, whereas since April 2008⁴⁹ non-periodical publications (books, brochures, ...) need to be submitted in two copies.⁵⁰ That distinction, however, is not always known or understood by the depositors. To librarians the difference between periodicals and non-periodicals (or between serials and monographs) may be obvious, but not to every publisher or author. One may argue that the ISBN and ISSN helps to distinguish both types of publication, but not all publications are registered with an international standard number and the common practice of registering individual issues of periodicals with an ISBN while the ISSN only designates the publication in its entirety does not provide clarity either. In fact, to the book industry it is imperative to identify each individual product (for instance to manage stocks and sales); it is not sufficient to merely identify the title.

Another disparity between libraries and the book industry concerns the data formats they use: in libraries MARC21 is still one of the common standards for bibliographic information, whereas the book industry has widely adopted the ONIX format. Given the reality that in the publishing and distribution sector the ‘ONIX for Books Product Information Message’ has become *the* international standard for representing and communicating book industry product information in electronic form, we will soon try to translate the current legal deposit legislation from Belgium in the ONIX format – as far as possible. The best

(48) The results of this project were presented at an international colloquium ‘Saving the web,’ organised at KBR on 18 October 2019. For more info and all the presentations, see <https://www.kbr.be/en/colloquium-saving-the-web/>.

(49) Law of December 19, 2006, article 2 (*Belgisch Staatsblad/Moniteur belge* of March 23, 2007) and Royal Order of February 14, 2008 (*Belgisch Staatsblad/Moniteur belge* of March 21, 2008).

(50) In an era of increasingly hybrid or even exclusively digital publications, we might reconsider the necessity of two print copies. Indeed, collecting one print copy and one digital version seems more useful in view of remote access, scientific exploitation and long-term preservation.

way to maintain a good understanding with the publishers is to speak the same language and clarify any ambiguity or vagueness.

As to the time frame, daily practice shows that the legal deadlines are not always respected. Some publishers deposit right away, others do it monthly or every quarter or even annually.

Work out a Communication Strategy & Plan to Raise Awareness

That leads us to the next measure to be taken: although nobody is supposed to ignore the law (*nemo censetur ignorare legem*), one should realise that in reality not everybody finds his way to the *Belgisch Staatsblad/Moniteur belge* nor is capable of understanding the legal jargon. If we expect publishers and authors to act upon the law, then we first have to provide easy access to the information, in simple language and with practical instructions.

However, offering clear and hands-on information alone will not be sufficient to enhance compliance with legal deposit. It is not only necessary to inform, but also to motivate. Apart from the legal obligation, why should anyone deposit? What is in it for them? Taking for granted that publishers and authors – both professionals and occasional ones – will spontaneously deposit solely on the grounds that there is a Belgian deposit law, is highly unrealistic. There is a need to work out both a communication strategy and an action plan to raise awareness.

Within the wide range of possible depositors, we should distinguish different target groups and approach each audience through the most appropriate channel(s) with a customised and persuasive message. From a traditional point of view, it may seem unusual for a national library to set up an awareness or even a marketing campaign, but it will surely contribute to achieve the goal of complete coverage.

An internationally recognised expert in marketing, Guillaume Van der Stighelen, offers valuable insights on how to create ‘a hero brand’ as well as an effective communication plan. He argues that four factors help to become a fixture or even enter the collective memory, notably one’s game, name, fame & claim.⁵¹

- Game: what is your big story or idea?
- Name: what is your name and what does it stand for?
- Fame: what makes you instantly recognisable?
- Claim: which tagline or baseline characterises you?

In March 2019 the Royal Library of Belgium launched a new branding to show that KBR is a library in (r)evolution that focuses on accessibility to its users. Applying the scheme, the branding is as follows:

(51) Guillaume Van der Stighelen, *Heldenmerk* (Leuven: LannooCampus, 2015), 45–57.

- Game: KBR is the national library and collects *all* Belgian publications. For centuries, we have been safeguarding time, by preserving traces of the past. KBR is an inspiring place offering access to a wealth of outstanding knowledge.
- Name: Historically, KBR is a contraction of three different names: ‘Koninklijke Bibliotheek’ or ‘Königliche Bibliothek’ and ‘Bibliothèque royale’. KBR became the name of the brand, resolving the naming problem in all languages and clearing up any uncertainty about the structure. KBR is more than just a library: it is also a museum, a place to study, a meeting space, and it has a broad cultural offer.
- Fame: **KBR** 
The logo represents an hourglass and time passing by. Rotated ninety degrees, it is also reminiscent of the infinity symbol.
- Claim: Where time is treasured (in English)
Koester de tijd (in Dutch)
Protégeons le temps (in French)

To return to the subject of legal deposit, any communication plan or awareness campaign on that matter should be fully aligned with the branding of KBR. Therefore, a leaflet designed to communicate the essence on legal deposit was built on the key concepts in the KBR branding (treasure or preserve – time passing by – access – infinity), adding the unique value proposition of a national deposit library (KBR collects *all* Belgian publications). Moreover, the communication engaged the publishers and authors (your work is tomorrow’s cultural heritage), included a call to action (check the catalogue to see whether KBR preserves your complete works) and answered the vital question ‘Why deposit? What’s in it for you?’ (KBR preserves your work and guarantees access to it for present and future generations). In sum, instead of enforcing the law, KBR promises eternal life. Who would refuse such a gift?⁵²

In the build-up to a yearly book fair in Brussels where KBR held a pop-up legal deposit stand, a similar invitation was sent by e-mail with the subject line ‘Welcome to the KBR information stand’. The mailing turned out to be a success, judging by the statistics, and by the visits to the stand, as shown in table 5.

	French-speaking authors	Dutch-speaking authors	French-speaking publishers	Dutch-speaking publishers
Delivered mails	n = 445	n = 889	n = 1,412	n = 1,619
Open rate	68.76%	72%	44.55%	43.11%
Click rate	12.81%	18.79%	6.37%	7.60%
Most popular link	The link to the catalogue: http://opac.kbr.be			

Table 5: Statistics of mailing to authors and publishers on February 26, 2020

Out of the six hyperlinks inserted in the message, the link to the catalogue proved to be the most popular one. Clearly, both authors and – to a lesser degree – publishers take an

(52) In the same vein, the British Library presents legal deposit as a service rendered to publishers: “We help UK publishers contribute to our nation’s heritage and inspire future generations,” <https://www.bl.uk/legal-deposit>.

interest in verifying the presence of their works in KBR and some of them even bothered to report missing titles. An encouraging finding.

Valorise the Deposit Collection and the Depositors

Of course, some depositors will prefer a benefit in the short term over the promise of eternity in the long run. Indeed, KBR does not only preserve the Belgian cultural heritage for generations to come, but is also committed to valorise the deposit collection in the present – e.g. by publishing the Bibliography of Belgium or by conducting research on the collection – and gratefully acknowledges the contemporary publishers and authors. As highlighted by Crews, “legal deposit is the foundation on which to build national library services” and “full advantage of deposit laws can exist only when national libraries implement a wide range of useful services based on materials received.”⁵³

Become a Key Player in the Book World and Develop a Long-Term Cooperation

As depicted in the first part of this article, KBR, for the time being, does not have a complete overview of new title releases from Belgian publishers or authors.

In order to get a fuller picture of the contemporary book production, KBR will honour its strategy “to be, par excellence, a network organisation.”⁵⁴ As the national scientific library, KBR strives to intensify and extend our cooperation with partners in the research, archive and publishing world, as well as with the regional or local governments in Belgium. One way to become a key player in the book world is for KBR to assume the role of ISNI registration agency for Belgian contributors to creative works.

Optimise Internal Workflow for Greater Efficiency and Effectiveness

Besides the previous outward actions, an optimisation of the internal workflow will also contribute to a higher efficiency and effectiveness.

A major change in this area is the switch from a reactive approach to a proactive one. Instead of merely receiving the declarations and deposits, KBR recently started to register in the library management system (LMS) not only the incoming titles or issues but also the new monographs that have not been declared or deposited yet. To manage the internal workflow, in particular the administration of reminders, three statuses have been added to the system, prior to the declaration or deposit:

(53) Kenneth D. Crews, “Legal deposit in four countries: laws and library services.” *Law Library Journal* 80 (1988): 575–76, https://www.aallnet.org/llj_article/legal-deposit-in-four-countries-laws-and-library-services/.

(54) KBR, *Actieplan 2019–2021*, (Brussels: KBR, [2019]), 4.

LMS Back-office	0a – Published
	0b – Claimed by KBR
	0c – Out of stock
	1 – Declared by publisher or author
OPAC	2 – Deposit not accepted (incomplete, damaged, ...)
	3 – Deposit received
	4 – Bibliographic record ready for quality control
	5a – Bibliographic record approved – ready for Bibliography of Belgium
	5b – Bibliographic record approved – not for Bibliography of Belgium
	6 – Bibliographic record published in Bibliography of Belgium

From status 4 on, the bibliographic record is integrated in the Online Public Access Catalog (OPAC).

Integrating pre-records of monographs in the LMS presents several advantages:

- first of all, it enables KBR to permanently monitor and assess the level of compliance with legal deposit. The aim is to keep the number of publications with status 0a to 2 as low as possible and the number of publications with status 3 to 6 as high as possible.
- it allows the Secretariat to easily register any incoming deposit, even when it arrives without any declaration (neither on paper nor online);
- it helps the team Prospection & Control to follow-up claims thanks to a search field that lists the monographs whose status ‘Claimed by KBR’ remained unchanged during two months;
- it saves time for the Agency of Bibliographic Information since the basic description has already been encoded;
- it prevents KBR from inadvertently purchasing works that are required to be deposited;
- centralising all information on the publications subject to legal deposit and on their publishers or authors facilitates and enhances collaboration between different teams.

Enhance Interdisciplinary and Transversal Collaboration

That brings us seamlessly to another way to increase the coverage. If the various services and teams all collaborate even more smoothly in their daily efforts to achieve user delight, then KBR will actually be perceived as a hero brand and publishers and authors will be honoured to become part of the nation’s heritage by depositing their works. As illustrated above, the work of every team is connected to one another and all employees of KBR share a common responsibility towards the users.

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Invest in Innovation and People Management

Set out a Clear Strategy in Times of Digital Transformation

From all the teams involved in improving the level of compliance, there are two teams whose support is especially needed: the LMS-team and the IT-department. The KBR Action

Plan 2019–2021 clearly defined the strategy to be followed: “KBR puts the user and his/her way of handling information at the centre. KBR integrates new technologies and automation in its full functioning.”⁵⁵ Hence, it contains numerous LMS- and IT-related objectives, some of which have already been achieved and others that are still in progress.

In order to track and trace ‘Belgian publications’ and to monitor compliance with legal deposit, these objectives are of key importance:

- increase the number of records in the online catalogue, *inter alia* by importing quality data produced by third parties
- introduce a policy of open and linked data

To easily exchange metadata and take full advantage of the opportunities offered by information technology, the use of international standard identifiers such as ISNI is imperative. Therefore, the systematic revision and enrichment of KBR authority data is a task that we all, together, undertake. It will significantly facilitate checking the level of compliance and, at the same time, improve the user experience.

Invest in People & Innovation Management

Not all people like change. For instance, when KBR switched to a new library management system in 2018, it took some time to adjust and to discover the full potential of the new system.

However, to check the coverage of the legal deposit collection new technologies and automation offer a great opportunity: even more, they are indispensable to compile a complete overview of ‘Belgian’ publications since 1966 and to swiftly compare them with the publications received by KBR.

How to approach an innovation process in a centuries-old institution that is justly proud of its traditions? According to a Ghent University spin-off called The Forge, making innovation happen firstly requires an innovative climate.⁵⁶ The most widely used and scientifically validated tool⁵⁷ to assess innovative culture is the Team Climate Inventory (TCI),⁵⁸ which measures 5 factors:

1. Vision: to what extent your team or company has clear and shared goals?
2. Safety: to what extent the people in your team or company feel safe enough to participate and to share knowledge, ideas or opinions?

(55) KBR, *Actieplan 2019–2021*, (Brussels : KBR, [2019]), 4.

(56) What follows, is strongly based on Michaël Van Damme and Geert De Wael, “Diagnose” and “Implement,” The Forge, <https://www.theforge.be/> (accessed May 19, 2020).

(57) Alexander Newman *et al.*, “Innovation climate: a systematic review of the literature and agenda for future research,” *Journal of Occupational and Organizational Psychology* 93, no. 1 (March 2020): 73–109, <https://doi.org/10.1111/joop.12283>.

(58) Neil R. Anderson and Michael A. West, “Measuring Climate for Work Group Innovation: Development and Validation of the Team Climate Inventory,” *Journal of Organizational Behavior* 19, no. 3 (May 1998): 235–58, [https://doi.org/10.1002/\(SICI\)1099-1379\(199805\)19:3%3C235::AID-JOB837%3E3.0.CO;2-C](https://doi.org/10.1002/(SICI)1099-1379(199805)19:3%3C235::AID-JOB837%3E3.0.CO;2-C).

3. Support: to what extent team members and colleagues help each other generate, monitor and implement innovative ideas?
4. Quality: to what extent are people in your team or company determined to reach the highest standards of performance?
5. Frequency: how often do your team members and colleagues communicate with each other?

Once a favorable environment has been created, a successful innovation process can take place in three phases:

1. idea creation & selection: get your team to think of new ideas and select the good ones;
2. idea promotion: convince your colleagues by using evidence-based charisma techniques and humour to propose a new idea or project;
3. implementation: to actually create innovation and keep it alive, organised action is needed.

At KBR, besides the clear strategy and a feasible action plan, there is still some progress to make regarding the innovation climate and mindset of the personnel. Not all see or seize the opportunities offered by digital transformation, although for time-consuming and routine tasks IT saves a lot of precious time and facilitates a systematic quality control.

Invest in IT-Skills of KBR Personnel

Unknown is unloved. Initial lack of competence generates frustration or opposition. However, each colleague should bear in mind that when acquiring a new skill, it is perfectly fine to feel clueless or inept at the beginning.

In fact, it is a completely natural part of the learning process in which the first stages are inherently frustrating according to the Stages of Competence model described by Maxwell in 1969⁵⁹ and introduced at Gordon Training International by Noel Burch in the 1970s:⁶⁰

1. unconscious incompetence: the beginner stage when one has no idea how to do something, nor what one needs to focus on;
2. conscious incompetence: the intermediate stage when one is still unskilled and struggling, but becomes aware of one's deficiencies and starts to understand what to do in order to improve;
3. conscious competence: the proficient stage, when the learner already has a good grasp of the skill, but practicing stills requires concentration;
4. unconscious competence: the mastery stage, when performing the skill no longer requires conscious effort and one can perform the skill at a very high level, mostly relying on one's intuition.

(59) Martin M. Broadwell, "Teaching for learning (XVI)." *The Gospel Guardian* 40, no. 41 (February 20, 1969): 2, http://www.wordsfittlyspoken.org/gospel_guardian/v20/v20n41p1-3a.html.

(60) Linda Adams, "Learning a new skill is easier said than done," Gordon Training International. <https://www.gordontraining.com/free-workplace-articles/learning-a-new-skill-is-easier-said-than-done/> (accessed May 21, 2020).

Understanding the four learning stages keeps one from feeling discouraged while learning, and also helps while coaching others. It allows to guide colleagues through the ups and downs of acquiring new skills and to tailor feedback to their proficiency level. For instance, to the beginner, feedback should be limited and straightforward, whereas skilled people are more eager to receive extensive, specific or complex feedback.

Actually, at the individual level, Anderson *et al.*⁶¹ discern a myriad of factors that have a substantial influence on one's mindset and innovative behaviour:

1. individual factors: personality traits, values, thinking styles, self-concepts and identity, knowledge & abilities and psychological states;
2. task contexts: job complexity, routinisation, goals & job requirements and rewards;
3. social contexts: leadership and supervision, customer influences, feedback, evaluation & justice and social networks.

It is just a matter of finding the right approach for each colleague.

Invest in IT-Infrastructure

Investing in IT-infrastructure is deliberately mentioned at the end, because it is a common mistake to think that acquiring new hardware or software suffice to create a state-of-the-art organisation.

CONCLUSION

Although for the time being it is a little too early for KBR to conduct a reliable measurement of the coverage of the national deposit collection because we first need a complete checklist of Belgian publications since 1966, the search of a scientifically valid method has surely allowed to identify various ways to improve the level of compliance with legal deposit. Even though a 100% coverage will remain an elusive goal, the wide range of measures proposed with regard to legislation, communication, valorisation, networking, internal processes, transversal collaboration, innovation & people management and investment in IT-skills & infrastructure will certainly help approaching the objective and enables KBR to permanently monitor to what extent publishers and authors comply with legal deposit.

(61) Neil Anderson, Kristina Potočnik, and Jing Zhou. "Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework," *Journal of Management* 40, no. 5 (July 2014): 1303–9, <https://doi.org/10.1177/0149206314527128>.

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