

# Unlocking the Value of Digitised Heritage Collections: Case Studies From ULiège Library

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Heritage libraries have faced significant challenges in terms of their collections' visibility since the great digital conversion. In the context of an overabundance of resources and faced with major players such as Gallica or Google Books, it is necessary for smaller institutions to develop a strong strategy to support the dissemination of their digitised heritage. The need for discoverability of contents, thus, becomes a strategic issue for librarians. As defined by the French Ministry of Culture in 2020, this notion 'in the digital environment refers to its online availability and ability to be identified among a wide range of other content, particularly by someone who is not specifically searching for it' (Ministère de la culture, 2020). The audiovisual sector was first influenced by this concept to enhance the findability of content on the web against major streaming actors (Thoër et al., 2022). It gradually came to encompass all cultural industries (e.g. bookselling, music). Discoverability also became a topic of interest for library managers who integrated it into their strategic planning for the development of their digital libraries or repositories (Bastard & Laborderie, 2023; Macgregor, 2023). This issue has been under consideration by ULiège Library for the last few years. This paper presents some practices that have been implemented by ULiège Library.

## DONum: A Project of Digitised Objects Repository

This section traces the history of the DONum project, from its inception as a dedicated platform for digitised heritage objects to its evolution into a comprehensive repository. It outlines the benefits of this project for the collections' curators, offering enhanced visibility and access to digitised collections. Furthermore, it highlights how DONum has grown beyond its initial purpose, becoming an essential tool for mediation and user engagement while continuing to support the academic community's needs for research and discovery.

The DONum project was born in 2009, within the consortium of French-speaking Belgian university libraries (*Bibliothèque*

*Interuniversitaire de la Communauté française de Belgique*, BICfB). At the time, it was considered an ambitious initiative, seeking to create institutional repositories for digitised objects within each collection-holding institution, along with a shared platform to present all these collections. This ambitious nature meant the project required several years of development. Indeed, within each institution, digitisation policies and projects varied in scope and were at different stages of advancement. Moreover, the heritage collections themselves were of varying scope and nature. In some institutions, such as in Liège, numerous departments, services, and laboratories would be potentially concerned, with heritage collections extending beyond the library's documentary holdings alone. Other university institutions experienced mergers during the same period, altering the scope of institutional projects.

The planned institutional portals were put into production separately, depending on the state of advancement, between 2012 and 2018. At the University of Liège, DONum (running on DSpace) went online in February 2015.<sup>1</sup> A month later, in March 2015, the library also launched the interinstitutional portal, called DONum BICfB, the development of which had been entrusted to it.<sup>2</sup>

ULiège Library preserves collections that were inherited at the time of the University's creation in 1817 and which have grown thanks to research, gifts, bequests, or acquisitions (Raxhon & Granata, 2017; Brassinne, 1924). At present, the University of Liège's collection is ranked among the largest heritage collections in Belgium, after the Royal Library of Belgium and Ghent University. It comprises 6,800 manuscripts (dating from the 9th century to the present), 570 incunabula, between 45,000 and 50,000 rare books, and dozens of archival fonds. While its Library is notable for preserving extremely important heritage collections, the University of Liège also stands out for containing several services that preserve heritage collections of various natures, including documentary, artistic, historical, and scientific collections. These services were federated into the Museum and Cultural Centre in 2021.<sup>3</sup> From the outset, DONum was intended to be open to all partner services with

1. <https://donum.uliege.be>

2. <http://donum.bicfb.be>

3. <https://www.musees.uliege.be>

digitised collections. Moreover, the portal was designed from the start to adapt to the description grid necessary for objects of various natures.

When it was put into production, DONum included just under 1,000 objects from the collections of the library and the *Maison de la Science* Museum. The initial collections were rapidly enriched, and new partners joined the project. The Wittert Museum chose to integrate thematic collections related to its temporary exhibitions from 2015.<sup>4</sup> Palaeontology collections also found their place, following the work of an intern. Subsequently, the portal was joined by the collections of the *Musée d'Art Contemporain en Plein-Air* (MACPA), the contemporary art museum of the University of Liège located on the heights of the city.<sup>5</sup>

DONum quickly demonstrated significant advantages for the library and partner services after it was launched. These advantages remain relevant to date. The first advantage concerns the conservation or preservation of documents and objects. While the University preserves exceptional heritage collections, it is also – primarily – a living research and teaching institution. The collections are not dormant: they are used every year by students, teachers, and researchers. However, these collections are fragile since, aside from their natural deterioration due to time, they suffer from frequent handling and consultations. The digitisation projects carried out within the institution by the various services have already made preserving digital reproductions possible, fixing their state at a given moment, regardless of their future evolution. DONum goes further by making this digital reproduction accessible to a wide audience, particularly the university community. Once accessible in DONum, the original documents can be adequately preserved. The consultation of documents housed in ULiège Library and Wittert Museum can be limited to a few cases of material or codicological studies, thus slowing down the effects of time on their physical state.

While DONum addresses an issue for librarians, it also meets the current needs of the university community and the public. The digital library facilitates access to documents, removing the constraints of physical consultation such as library opening days and hours, limited numbers of copies, and the impossibility of borrowing. On DONum, documents are accessible to an unlimited number of users without time

4. <https://www.wittert.uliege.be>

5. <https://www.museepla.uliege.be>

or location constraints. Thus, the work of students and researchers, which often requires flexibility, is simplified.

For all partner services and the institution, DONum presents advantages in terms of valorising collections. Visitors can find a representative example of the richness and diversity of the institution's heritage on a single platform. The collaboration of several services on the same platform allows for cross-promotions, associating collections of various natures in the same communications.

The DONum project is also part of the open access policy of the University of Liège. DONum aligns with other projects launched at the University of Liège, as in other universities in Belgium. With open access as its foundational principle, DONum is a complementary facet to the other portals, namely Open Repository and Bibliography (ORBi), the institutional archive of the University of Liège;<sup>6</sup> *Portail de Publication de Périodiques Scientifiques* (PoPuPS), the portal for diamond open access academic journals and proceedings;<sup>7</sup> and Master Thesis Online (MatheO), the portal for accessing to the University's master's theses.<sup>8</sup> For better and more comfortable access, the digitised files in DONum have been reduced to a lighter format while still allowing real readability. In any case, high-resolution copies are available, under some conditions, from the department or service conserving the physical item.

As of July 2025, the portal hosts more than 13,000 items. The printed books section is the largest, comprising 5,100 books from the 16th century to the present day; this section includes nearly 36% of all objects deposited in DONum. The prints and engravings (about 1,900) section is the second largest, and it includes more than 300 pieces from the 16th century executed by the great masters of the Renaissance, such as Albert Dürer, Lucas Cranach, Pieter Bruegel, and the Wierix brothers from Antwerp. DONum also houses fewer than 1,000 manuscripts. The two oldest manuscripts date from the 9th century, one fragment of the *Vita Karoli Magni* (*Life of Charlemagne*) written by Einhard and a collection of texts by Hieronymus and Bede the Venerable. ULiège Library has almost all its incunabula in DONum, resulting in 552 digitised incunabula. A few dozen incunabula could not be digitised

6. <https://orbi.uliege.be>

7. <https://popups.uliege.be>

8. <https://matheo.uliege.be>



for reasons of preservation (e.g. poor condition of the book, damaged binding).

In addition to the classic features for searching inside the portal, two aspects have been developed to improve the visibility of digitised collections. Scientific blogging is the first aspect. These blog posts have been conceived as scientific mediation tools. They support digitisation projects by providing scientific presentations, linking to a selection of digitised books and bibliographical references. The selection of themes relies on three main aspects: actuality, the promotion of a specific collection or an author, and exhibitions organised at the University or in collaboration with partners. The home page of DONum allows access to the various blog posts. Thus far, the authors of the posts have been library staff members.

One of the latest posts celebrates the 300th anniversary of the birth of Immanuel Kant (22 April 1724).<sup>9</sup> The idea behind this post was to provide an entry point into the philosophy of the renowned German philosopher and a guide to his 19th-century works held at the ULiège Library. Another post was written at the end of a project concerning the digitisation of all handwritten chronicles from the early modern period relating to the history of the principality of Liège.<sup>10</sup> The objective was to increase awareness among the patrons of ULiège Library about the richness of manuscripts in this collection. In 2023, ULiège Library decided to publish a post dedicated to the patron saint of the city of Liège, Saint Lambert. Published on 17 September 2023, the day of this saint's feast,<sup>11</sup> this text offered an occasion to explore the historical figure of this bishop assassinated in Liège in the late 7th or early 8th centuries. This martyrdom marks the starting point of the foundation of the city. The construction of his legend was then evoked before returning to the iconography related to him and the surviving practices of worship from the 19th century.

The purpose of the blog posts is to translate scientific subjects into a more accessible and understandable format for users of ULiège Library, whether they are students, researchers, professors, or amateurs. The goal

9. *Kant : trois cents ans d'une méthode immortelle*, <https://donum.uliege.be/news?id=56>

10. *À la rencontre des chroniques liégeoises de l'époque moderne*, <https://donum.uliege.be/news?id=55>

11. *Un meurtre, une ville, un évêque... l'histoire de saint Lambert*, <https://donum.uliege.be/news?id=53>

is to use the DONum portal to give the user community access to high-quality knowledge grouped around a specific theme, as well as digitised works related to this subject.

Moreover, in 2015, an idea was born around the possibility of optimising the visibility of heritage collections in open access by associating scientific content of great rigour, accessible free of charge, with the digital objects of the University of Liège. Alongside metadata and digital representation, users have access to a new tab in DONum containing scientific presentations of digitised resources, as it can also be found in an exhibition catalogue (Figure 1). The texts offer biographical information about the author and a description of the book's contents, its eventual significance, and certain aspects of the copy (e.g. ownership mark(s), binding, illumination).

**Informations**

**Anselmus Leodiensis, Gesta Pontificum Leodicensis ecclesiae.**

Auteurs, créateurs, collaborateurs : Anselme de Liège  
 Type d'objet représenté : Manuscrit  
 URL permanente <https://hdl.handle.net/2268.1/3277>

**Détails Fichier(s) Présentation scientifique**

Inspirés du *Liber Pontificalis*, histoire des évêques de Rome entamée au VI<sup>e</sup> siècle et continuée jusqu'au IX<sup>e</sup> puis au XIV<sup>e</sup> siècle, les *Gesta episcoporum* retracent l'histoire d'un diocèse au gré des hauts-faits, bons comme mauvais, de ses évêques depuis les origines apostoliques réelles ou légendaires du siège jusqu'à l'époque de sa rédaction. Ce genre littéraire d'origine carolingienne se distingue de la biographie par son projet historiographique – l'établissement d'une lignée sainte de prélats – et d'indéniables revendications d'ordre politiques, hagiographiques ou encore juridiques. Les *Gesta* des évêques de Tongres-Maastricht-Liège n'échappent pas à cette définition en règle.

Les *gesta* primitifs, attribués à l'érudit, moine de Lubbe (ca. 550-1107), s'étendent de l'épiscopat de Maternus, premier évêque de Tongres (début VI<sup>e</sup> s.), à celui de Remacle (milieu VII<sup>e</sup> s.). Premiers du genre dans l'Eglise ottonienne, ils furent rédigés à la demande de l'évêque Notger (985-1008), fidèle serviteur de la politique impériale, dans l'évident dessein de délimiter la topographie sacrée et le développement historique du diocèse. Un demi-siècle plus tard, le chanoine Anselme de Liège († 1056) retraça, à la demande de l'abbesse Ida de Sainte-Cécile de Cologne, sa maraine, la lignée sacrée des évêques de Liège de Maternus origines à Wazon (1042-1048). Dans une seconde version de son œuvre, dédiée à l'archevêque Annon II de Cologne, il substitua les *Gesta d'Heriger* à son premier livre, se posant ainsi en continuateur, à partir de Théodard, prédécesseur de saint Lambert. Son intention de rédiger la biographie de Wazon est rendue évidente par le déséquilibre du texte dont plus de la moitié est consacré aux hauts-faits de ce prince.

On tient dans le ms 3173 la plus ancienne copie liégeoise connue de ces *Gesta* à deux mains, datable par son écriture du début du XIII<sup>e</sup> siècle (J. Stienen). Originale de l'abbaye cistercienne d'Aulne, elle était connue de J. Chapeville qui la mentionne dans son édition (1612). Écartée par R. Koepke, éditeur de ce texte pour les MGH (SS 7 - 1846), cette tradition fut réhabilitée par G. Kurth, au cours des recherches qu'il a menées sur ce texte suite à la redécouverte d'une copie inconnue de l'éditeur allemand dans les archives de l'abbaye d'Averbode (AA I.12.12 - 12<sup>e</sup> - 13<sup>e</sup> s.).

Versé dans la collection de sir Thomas Phillips (Middlehill/Cheltenham, 435), peut-être la plus riche jamais constituée par un particulier, ce manuscrit fut acquis par l'Université de Liège à Londres en 1948.

**LIÈGE université** Florence Clopez  
 Professeure d'Histoire du Moyen Âge occidental

Figure 1 – Scientific presentation of ULiège Library's manuscript 3173 (Anselmus Leodiensis, Gesta Pontificum Leodicensis ecclesiae) on DONum.

These approaches place librarians as knowledge prescribers. They are seen as experts in content production and curation and knowledge mediation and as facilitators of the circulation and sharing of information and knowledge.

However, given the size and the variety of the collections, partnerships were developed with laboratories within the University. The plan was to utilise crowdsourcing to generate scientific content for the DONum portal. ULiège Library contacted the research unit *Transitions*, which gathers PhD students, researchers, and professors working on the Middle Ages and the Early Modern period. This collaboration led to the development of the *Arm@rium Universitatis Leodiensis* in 2017.<sup>12</sup> The digital library of the Middle Ages and the Early Modern period of the University of Liège is a unique tool in Belgium. For the first time, scholars and librarians have been collaborating to propose scientific content associated with digital representations of manuscripts, prints, and early printed books, and the collaboration is still ongoing. However, crowdsourcing has some limitations (Benil, 2022). The most significant problem is the potential absence of willingness of volunteers. The success and sustainability of this project are greatly dependent on the availability, desire, and involvement of these researchers (Di Méo, 2025).

### **Simplifying Access and Enhancing Discoverability: Integrating DONum Into the Library Catalogue**

Beyond ensuring the preservation and digitisation of heritage collections, providing seamless access to these resources is a key mission for ULiège Library. This section explores how the digitised content curated within DONum has been progressively integrated into the Library's discovery tools and catalogue infrastructure. The integration complements the preservation work by enhancing discoverability, linking digital and physical representations, and adapting to evolving user expectations in terms of access and navigation.

In 2013, ULiège Library moved from its traditional Aleph OPAC to a more efficient next-generation solution allowing the integration of external resources: the Primo discovery tool (by Clarivate | Ex Libris). In February 2015, the libraries completed their migration from the integrated library system Aleph to the library management system Alma (also by Clarivate | Ex Libris). The public catalogue stayed operational with Primo BO (Primo Back Office).

12. [https://www.transitions.uliege.be/cms/c\\_4051720/fr/transitions-arm-rium-universitatis-leodiensis](https://www.transitions.uliege.be/cms/c_4051720/fr/transitions-arm-rium-universitatis-leodiensis)

To enhance the visibility of digitised heritage collections, and considering that Primo is the primary access point for resource discovery, open access collections from various digital archives of the Belgian French-speaking university libraries were harvested by ULiège's Primo from the so-called DONum BICfB repository from early 2016. Moreover, digitised materials with restricted access from ULiège were also included. Thus, two DONum datasets – one each from ULiège and DONum BICfB – were integrated into the University discovery tool.

This integration is not without its problems of consistency and quality. For ULiège resources, two distinct records appear in a search result – one from the Alma library management system (LMS) for the records related to a physical copy and the other from DONum (DSpace instance) for the records related to a digital representation. Several issues come to light, including different treatments of specific document types such as bound-with volumes, or *Sammelbands*, in the two interfaces; erratic linking between records; and a relevance ranking that does not always place printed and digitised resources consecutively in search results. Since the early configuration of Primo in 2013, a 'Heritage Collections' facet has been generated based on a specific element in the MARC21 source record. However, only physical documents benefit from this facet, excluding the digitised objects from DSpace, which can limit its effectiveness and relevance (Richelle & Goukens, 2019).

Furthermore, as the LMS has a digital asset management (DAM) component, there are many questions about the possibilities for integrating DONum data and potential interoperability. One issue under consideration concerns the import of DONum ULiège data into Alma, encompassing both metadata and digital representations associated with collections that do not belong to the library, such as artefacts and palaeontology collections. This issue also involves determining whether existing Alma and DONum records should be merged during the import process and identifying the reliable criteria upon which such decisions might be based. Furthermore, it is also necessary to evaluate the appropriateness of utilising Alma's digital component (Alma Digital) for file storage.

Together with the analyses of tools and integration possibilities, consideration must also be given to the computerisation and visibility of manuscripts and archival collections. The few medieval manuscripts

selected under the first PEP's plan<sup>13</sup> of the Wallonia-Brussels Federation have been described in both DONum and the LMS (at that time, Aleph), without any technical integration between the tools. On the occasion of a conference held in Liège in 2017 (Tilkin, 2020), a provisional solution was implemented regarding the management of archive inventories. To highlight the Weissenbruch family of printer archives, an XML editor (Oxygen) has been used for EAD encoding. An XSL transformation then displays the content in a user-friendly format, allowing for tree-like navigation and webpage searching (Richelle & Goukens, 2019).<sup>14</sup>

To ensure coherent integration of the various components of the Weissenbruch collection, including the preservation measures applied to them (such as conservation and digitisation) through the use of dedicated tools (Oxygen, DONum), and to facilitate efficient access and management of the collection, a MARC21 record was created in the LMS Alma. In this record, the archive was described concisely, and an item was created for each folder, box, photo album, or object – everything that could be requested by users. The MARC record serves as the central point leading users to different access paths, namely access to original archive documents via the 'physical items', access to descriptions of books and periodicals stored in other sections of the Library, access to digitised parts stored in DONum as explained by Simon (2020),<sup>15</sup> and access to the detailed archive inventory webpage. At that time (i.e. 2019), only the physical and electronic inventory components of the LMS were in use (Richelle & Goukens, 2019)<sup>16</sup> as the digital component was not yet deployed.

This framework became the starting point for further reflection on the DONum–Alma–Primo integration.

13. Since 2008, the digitisation plan known as *Préservation et Exploitation des Patrimoines* (PEPs) has had two objectives: (1) to preserve the cultural heritage of the Wallonia-Brussels Federation through digitisation campaigns, taking care to safeguard the cultural and heritage collections held in museums, archive centres, libraries and audiovisual institutions, and (2) to enhance this heritage by providing access to the digitised collections via the [www.numeriques.be](http://www.numeriques.be) portal.

14. [https://app.lib.uliege.be/archives/fonds\\_weissenbruch.xml](https://app.lib.uliege.be/archives/fonds_weissenbruch.xml)

15. <https://donum.uliege.be/handle/source/weissenbruch>

16. The use of the digital component will come later, with the implementation of Primo VE in 2019.

During 2018–2019, ULiège Library implemented Primo VE, a new cloud-based deployment model designed to optimise the management and delivery of the Primo discovery solution. This implementation presented an opportunity to rethink how DONum was integrated into the discovery tool. Simplifying the user experience to avoid redundancy and confusion in the search results became the priority. Furthermore, a Primo feature remained unused, namely the new Primo VE model managed entirely through the Alma back office, which offers configuration ease that simplifies the implementation of the Collections feature. In Alma, a collection refers to an entity that brings together bibliographic records which share a certain form of relationship. Such a collection may be organised around a particular theme or subject area; for instance, a collection entitled *Bob Dylan*, focused on the renowned singer, might encompass a wide variety of materials including physical resources such as biographies and sheet music, as well as digital audio and video recordings of live performances and studio sessions. It may also include various holdings of songs and albums in multiple formats. Importantly, each collection is associated with its own bibliographic record and may contain items across different resource types, including physical, digital, and electronic formats (Ex Libris, n.d.-a).

The Collection Discovery interface in Primo enables users to browse collections that are defined in Alma. The front-end Primo interface will refer to them as ‘Galleries’, thereby highlighting the heritage aspect that has been at the core of the project from the outset, since one of the initial considerations surrounding these ‘collections’ was the possibility of offering a ‘catalogue of manuscripts’.

Attention has, therefore, been turned to the structure established in 2017 for the Weissenbruch Collection, which was subsequently applied to other archival collections. New strategic choices are being implemented as enhancing the front-end and the user experience requires improvements in resource management:

- The collective DONum–BICfB instance, which aggregates BICfB institutions’ repositories, is no longer harvested as a whole. Instead, a set is published per institution, and separate import profiles allow for a more tailored approach to each repository.

- While the DONum ULiège DSpace instance is still harvested, it is now only used for digitised materials that are not part of the library collections, such as the Wittert Museum collections,<sup>17</sup> MACPA collections,<sup>18</sup> and palaeontology collections.<sup>19</sup> Various import profiles – one per document type – are created in the Primo VE configuration.
- Digitised documents held by libraries, such as books, manuscripts, and cartographic materials, are linked in Alma to the description of the corresponding physical resource in the form of a digital inventory accessible remotely via the DONum repository (no files are stored within the LMS itself). By the time the new Primo was launched in September 2019, about 2,400 DONum records had been manually integrated as a digital inventory in Alma.

Alma Digital has, thus, been used not only to manage access to digitised heritage resources but also to facilitate access to other digitisation projects beyond DONum. One such project is eTFE, which focuses on the digitisation and online dissemination of students' final-year papers and master's theses. As with DONum, access was initially managed through external links to PDFs stored on a local server, integrated into Alma. However, due to contractual and financial constraints, this solution was replaced for the eTFE project by its equivalent in Alma's electronic component (Alma-E). For catalogue users, the result remains the same: the new Alma electronic collection contains all portfolios and records along with a link to the electronic inventory, and access to the digitised dissertations is provided via a link to the remote server on which the PDFs are stored.

Meanwhile, the computerisation of the manuscripts has continued, not within the integrated library system (LMS), as was the case in 2013 for the medieval manuscripts included in the PEP's programme, but using the Oxygen environment and EAD encoding. This work has remained confidential, however, as no public search interface was ever planned.

The challenge now is how to make these descriptions accessible. Some manuscripts are digitised and available on DONum, but the DSpace instance only provides limited metadata and does not allow for linking

17. <https://donum.uliege.be/handle/provenance/collartist>

18. <https://donum.uliege.be/handle/provenance/museepleinair>

19. <https://donum.uliege.be/handle/provenance/fossils>

between records or creating a hierarchical structure. Although this instance provides digitised content, it does not serve as a substitute for the catalogue or the EAD environment, both of which are capable of supporting significantly richer metadata structures. Once again, several options were examined, including the development of a specialised search interface based on the EAD files. However, such a project would have been time-consuming and disproportionate to the number of documents concerned at that stage. The possibility of importing the EAD content into Alma was also considered, but preliminary tests yielded inconclusive results, leading to the swift abandonment of this approach.

The project is, thus, evolving towards a dual encoding of manuscripts, in EAD via the Oxygen environment and in MARC21 within the LMS.<sup>20</sup> In some cases, a third layer is added through DONum, along with a digital inventory in Alma when the item has been digitised. The dual 'physical/digital' inventory structure in Alma also compensates for the lack of a two-level hierarchy in DONum, which had previously hindered the online dissemination of digitised periodical collections. As a result, digitised periodicals have now also been made accessible via Primo. It is also worth noting that certain institutions, such as the Royal Danish Library, have opted to catalogue their collections of manuscripts and private archives in the MARC21 format directly within the Alma system and store detailed digital representations of the finding aids through Alma Digital (Toftgaard, 2024).

The approach adopted in Liège forms part of a broader strategic reflection on the valorisation of heritage collections. The digital representations remain stored in the DSpace instance, and the DONum portal continues to serve as the primary access point for digitised resources alone. However, the discovery tool opens up new possibilities. While the need for proper cataloguing has clearly been addressed through the various solutions implemented, there is also a growing demand for a search interface aligned with researchers' practices, such as provenance-based navigation for manuscript collections.

## **Heritage Galleries With Primo Collection Discovery**

This section returns to the functionality mentioned earlier: the use of Collections in Alma and Primo has allowed rethinking the visibility of

20. The encoding in EAD using the Oxygen tool has been maintained to this day.



manuscripts. In this context, adding a digital inventory to a bibliographic record requires associating the record with a Collection. While many digitised resources, despite their heritage value, do not need to be prominently featured (or are highlighted only temporarily as part of an exhibition), others require a differently structured presentation. In addition to the physical/digital association within the catalogue and discovery tool, a representation of these collections as distinct entities needs to be made possible. Thus, the Collection Discovery component will serve as an online inventory mechanism for the manuscript holdings.

A parallel issue arises in the case of early printed books. The University holds 570 incunabula, all catalogued in MARC21 within the library management system and digitised. However, within the broader environment of the discovery tool, such works risk remaining obscured. A more targeted approach, such as categorisation by place of printing,<sup>21</sup> would more effectively meet the needs of specialist users.

To broaden the scope and impact of this functionality, additional types of collections have subsequently been incorporated alongside these two initial sets. These include materials relating to the historical heritage of Liège; archival holdings; noteworthy works in various disciplines such as architecture, botany, and law; and collections of cartographic materials.

Following recent updates deployed by Clarivate | Ex Libris, the Collection Discovery feature has undergone significant enhancements. It now supports searching across all metadata contained within a record, thereby reinforcing the decisions made by the library systems team. From the Collections Lobby, users can search the Galleries component as a whole<sup>22</sup> or explore individual galleries, retrieving indexed data from both the bibliographic record (including non-preferred terms from authority records linked to access points) and the holding record (such as copy-specific notes and codicological details). Moreover, multilingual descriptions have been added to the titles of collections, and the majority of records now display a thumbnail image.

Significant changes have been made to the initial framework of the Galleries, including the introduction of new collections and the reorganisation of existing ones. However, their use remains confined to

21. A country–city–printer hierarchy was considered initially but quickly abandoned as it resulted in too many clicks for the user.

22. [https://explore.lib.uliege.be/discovery/collectionDiscovery?vid=32ULG\\_INST:ULIEGE](https://explore.lib.uliege.be/discovery/collectionDiscovery?vid=32ULG_INST:ULIEGE)

## Opening up our Heritage

a subset of the heritage materials (Figure 2). Neither have all documents been digitised nor are all documents amenable to digitisation; moreover, not all digital items have been incorporated into the defined collections. This selective approach underscores the fact that the Galleries are not intended to serve as a mere alternative interface to the catalogue but rather as a distinct curatorial framework.

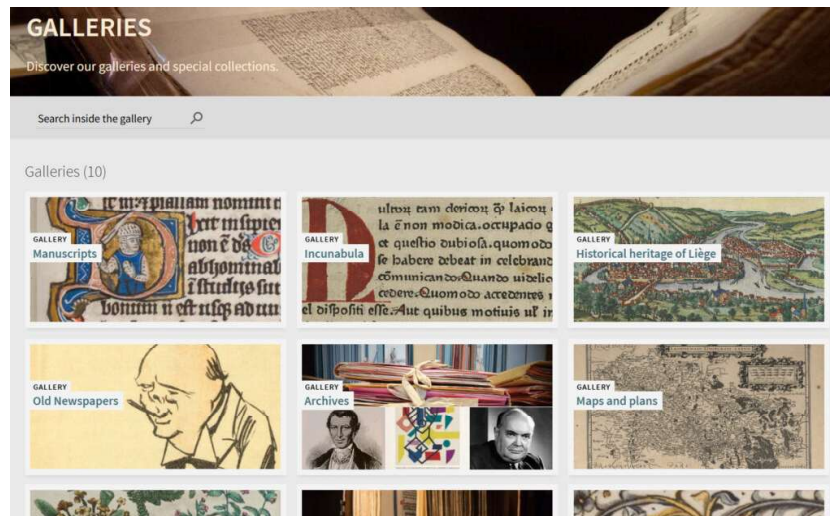


Figure 2 – The heritage Galleries.

## Legito: An Independent Primo View

Despite the completion of the Collection Discovery component, a critical need persisted for a dedicated search interface specifically designed for manuscript materials – one that would support granular levels of indexing and provide facets aligned with the distinctive characteristics of this resource type. At that juncture, the proposal to implement a parallel Primo VE view, later called Legito, operating independently from the main ULiège Library production view, was considered a simple and effective solution. It was, therefore, not deemed necessary to seek out a new tool dedicated exclusively to manuscripts and archives that would offer greater functionality than the existing XML editor. The decision was made to encompass not only manuscripts and archives but also all printed material classified as heritage: incunabula and publications printed before 1831, as well as rare editions published thereafter. The focus remained strictly on institutional holdings, whether

digitised or not, thereby excluding electronic resources and the Central Discovery Index, 'a central, unified index, for scholarly and academic material worldwide' (Ex Libris, n.d.-b), which constitute the core of the discovery tool.

The structure of the search interface, therefore, required a re-evaluation in light of the specific characteristics of this 'heritage' corpus. This process entailed, first, a careful assessment of user needs, followed by a critical analysis of the default configuration settings to determine which elements should be excluded, adapted, or retained.

A primary divergence from the main production view was the reintroduction of search scopes at the simple search level. Whereas the main view is based on a blended search scope, the heritage-focused interface foregrounds the three principal categories of materials it comprises – printed works, manuscripts, and archival documents – thus aligning the search logic more closely with the conceptual organisation of the collection.

The first facet that is displayed is related to the genre or form of the document. This genre/form is based on the RAMEAU controlled vocabulary<sup>23</sup> and allows filtering by document forms, such as periodicals, maps, or brochures, as well as by genre, including categories such as 'mazarinades' and popular songs. It also includes other typologies to serve specific local needs, for example, incunabula and broadsides.

This facet replaces the traditional top-level facet in Primo VE views, which has been repositioned to the bottom. The top-level facet serves to isolate online resources, that is, those with a digital representation within DONum.<sup>24</sup> As of mid-October 2024, this facet retrieves 6,015 results, corresponding to 6,015 digitised works. Subsequently, a series of tailored facets is provided, reflecting both the nature of the documents and the specific needs articulated by users. These facets include provenance, printer, country and city of printing or creation, illuminator, and

23. RAMEAU (*Répertoire d'autorité-matière encyclopédique et alphabétique unifié*) is a French-language subject authority system used in libraries for indexing. It is comparable to the Library of Congress Subject Headings (LCSH) but adapted to francophone cultural and documentary contexts.

24. Mostly from DONum: archive fonds, which do not necessarily have associated digital representations, or only partially, have their inventory accessible online, either via the publication of the EAD file, or via publication in ORBi by the authors of the inventory.

illustrative content. Equivalent limits are also integrated into the advanced search form, which offers search filters for printers, illuminators, and provenances.

This configuration extends beyond the default Primo VE setup. Although it seems rich and contextual, it is constrained by the inherent limitations of the system. Notably, the extensive array of name forms linked through authority records is lost once the default configuration is modified. For example, a search for 'Plantijn' within the 'Printer, Publisher' index returns no results, even though it is a variant form in the authority record 'Plantin, Christophe',<sup>25</sup> which is used in the bibliographic record to identify the printer.

These necessary adaptations implemented to finalise the project have positively impacted data quality. Numerous records have been reviewed, and their metadata has been enriched and consolidated. Some documents recorded as undated in the catalogue can, thus, be more precisely identified and successfully integrated into the heritage scope. Furthermore, the project has led to the establishment of a clear and consistent cataloguing policy for heritage collections.

In addition, the Gallery facet has been retained in its original form from the main Primo view. The 'Find It @' feature, which allows extending the search to external catalogues or databases, was adapted for this scope: users can broaden their search to the local scanned paper records database (called *Scribe*) or redirect their search to external bibliographic resources such as the Incunabula Short Title Catalogue (ISTC) or the Universal Short Title Catalogue (USTC).

In June 2020, the Legito catalogue was launched with about 36,000 records.<sup>26</sup> By the end of 2024, this number had grown to nearly 38,000, comprising close to 1,300 manuscript records; 36,400 descriptions of printed documents, of which 34,550 relate to works printed before 1831; and 29 archival collections. Of all these, 955 manuscripts and 5,035 printed works have been digitised.

The future of this tool, however, remains uncertain. The new version of the Primo front-end, called Next Discovery Experience (Primo NDE), may, in the medium term, provide opportunities to enhance our user

25. Heading for 'Plantin, Christophe (1520?-1589 ; imprimeur-libraire)' in IdRef, <https://www.idref.fr/03447675X>.

26. [https://explore.lib.uliege.be/discovery/search?vid=32ULG\\_INST:Legito](https://explore.lib.uliege.be/discovery/search?vid=32ULG_INST:Legito)

services. Conversely, it may necessitate a reassessment of certain strategic or technical choices made during the development of the Legito project.

### **DONum–Alma–Primo: Towards True Integration?**

Following the various efforts undertaken to enhance and streamline the user experience, the question of achieving genuine integration between the different tools now arises. Currently, metadata in DONum is manually entered by copy-pasting data from the Alma LMS or the record displayed in the discovery tool. This process introduces inconsistencies: when a MARC record is updated in Alma, the changes are not necessarily propagated in the DSpace instance. The only persistent identifier linking the systems is the barcode assigned to the physical document. However, this identifier proves insufficient in certain cases, particularly with bound-with volumes, where only one barcode is used in the LMS.

A preliminary analysis of the situation reveals the need for integration at the metadata level. This integration involves injecting the system identifier from the LMS into DONum, establishing an export profile or regularly publishing Alma data, and developing a robust mapping between Alma and DSpace. Moreover, this integration must be bidirectional: not only should the digital representation be registered within Alma through the use of APIs but also the holdings data, reflecting ongoing preservation activities, should likewise be updated in real time to ensure consistency and completeness across platforms.

Although the lack of integration between DONum and the LMS has already been noted, we also regret the lack of connection between the two Primo views – the main one for all ULiège Library resources, based on a complete discovery experience, and another one limited to physical heritage collections, whether digitised or not. It is worth considering whether a renewed evaluation, prompted by the development of the tools themselves, might help to resolve some of the current limitations and shortcomings.

A further concern lies in the delineation of the collections' scope, particularly in the criteria used to define it. This delineation is currently determined either by the resource's date of printing or creation or through the manual insertion of a local MARC field. In the latter case, a lack of consistency between the content in DONum and Legito is regularly observed: some digitised documents dating from after 1830, which might reasonably be expected to fall within the heritage collections, are missing

from Legito. This inconsistency must also be addressed in any future development or refinement of the associated tools.

As noted previously, the current limitations in search functionalities also warrant further scrutiny. It will, therefore, be necessary to assess the relevance of such a specific approach and explore alternative strategies for showcasing the richness and diversity of our heritage holdings.

## Conclusion

The policy of ULiège Library to increase the discoverability of its digital heritage collections operates across multiple layers. While DONum was conceived as the principal platform for the dissemination and promotion of the University's digitised holdings, institutional efforts have extended well beyond this initial framework. It is unrealistic to assume that all visitors, whether students, researchers, teachers, or members of the general public, are familiar with DONum or will intuitively navigate to it to explore or search the collections. In the contemporary digital environment, institutions must adopt a multifaceted approach to ensure a seamless and intelligible access pathway to their collections, tailored to the varied needs and contexts of different user groups.

The navigational fluidity is achieved by implementing coherent and systematic interlinkages between tools and initiatives, as well as by paying meticulous attention to metadata and referencing practices. Such efforts enable users, regardless of their prior knowledge of DONum or the University of Liège, to discover these resources intentionally rather than serendipitously. Along this access pathway, the provision of contextual and interpretative content serves to deepen users' engagement and understanding of the collections. From this perspective, all the initiatives discussed in this chapter are intended to function in a complementary and mutually reinforcing manner.

These initiatives, though distinct in their objectives and target audiences, converge towards the same goal of making ULiège's heritage collections accessible and meaningful to a diverse range of users, thereby enriching the Library's mission to preserve and disseminate cultural heritage.

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## Abstract

This paper examines the strategies developed by the University of Liège (ULiège) Library to enhance the discoverability and value of its digitised heritage collections. In a landscape dominated by large-scale digitisation platforms, smaller institutions face the challenge of ensuring the visibility and accessibility of their cultural assets. The DONum project (*Dépot*



*d'Objets Numérisés*), launched in 2009, exemplifies ULiège Library's response to these challenges. Initially conceived as a digitised objects repository within a consortium of Francophone Belgian university libraries, DONum has evolved into a comprehensive and inclusive platform hosting over 13,000 digitised items. This paper explores how DONum not only facilitates conservation and public access but also integrates open access principles, scientific mediation through blogging, and crowdsourced content via academic partnerships such as Arm@rium Universitatis Leodiensis. The study further addresses the technical and strategic complexities involved in integrating DONum with ULiège's library management system (Alma) and discovery interface (Primo), including the consistency of the metadata, enhancements of the user interface, and development of a dedicated Primo view, Legito, for heritage materials. These integrations aim to streamline user experience, improve searchability, and maintain bibliographic coherence across platforms.

### **Keywords**

Digitised heritage collections; DONum project; Alma library management system; Primo discovery solution; Integration; Cultural portal; Digital library