D Bibliothèque nationale du Luxembourg

> THE BNL'S ECONOMIC IMPACT ON EUXEMBOURG'S KNOWLEDGE SOCIETY

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"The BnL confirms what Jorge Luis Borges said: 'I have always imagined that paradise will be a kind of library."

Opinion of a survey participant

Table of contents

4 Foreword

10 Management Summary

6 **Preface**

Management of the National Library of Luxembourg bms marketing research + strategy

13 CHAPTER 1

Objectives of the study

- 16 CHAPTER 2 Respondents and users of the BnL
- 17 2.1 Respondent characteristics
- 20 2.2 Frequency of use
- 22 2.3 Demand for services and offerings
- 32 2.4 User satisfaction
- 36 CHAPTER 3 The importance of the BnL for Luxembourg as a centre of knowledge and research

42 CHAPTER 4

Cost analyses under different scenarios

- 44 4.1 Currnet investment
- 48 4.2 Costs of using alternatives to the BnL
- 50 4.3 Acceptance of price increases
- 54 4.4 Willingness to pay in the event of loss of the BnL
- 62 4.5 Possible compensation payments by the state

64 CHAPTER 5 How much is the BnL worth to its users?

- 65 5.1 Method for determining the added value
- 68 5.2 Added value of the BnL for the knowledge society

72 CHAPTER 6 Users' wishes for the future

80 List of figures

81 Appendix

Foreword

The Bibliothèque nationale du Luxembourg (BnL) is far more than a repository of books. It lies at the very heart of Luxembourg's knowledge society and serves as an essential foundation for research, education, science, and culture. As a guardian of cultural heritage, it bridges the past and the future—with unique analogue and digital collections that are freely accessible to all.

But beyond being a place of knowledge, it is also a space for interaction, inspiration, and exchange for the entire public. This study highlights the central role of the BnL and brings three key insights into focus:

Preservation and digitisation of cultural heritage

Ensuring the long-term availability of Luxembourg's collections is a core mission of the BnL. It is especially encouraging that nearly all users surveyed see the library's ability to provide lasting and low-threshold access to information as its most important function. Continued digitisation and the safeguarding of our cultural heritage therefore remain top priorities.

Guidance through the flood of information

In an increasingly complex knowledge landscape, the targeted selection of high-quality information is essential. All partner libraries surveyed unanimously stress that the BnL must provide cutting-edge technologies to simplify the search for scholarly information and accelerate digital transformation. This is the only way the National Library can sustainably strengthen Luxembourg's position as a centre for research and give the country a competitive edge.

Social participation and inclusion

More than three quarters of respondents view the BnL as more than a traditional library: they see it as a place for social exchange and intercultural understanding within Luxembourg's academic landscape. In this sense, the BnL fosters digital, social, and cultural participation for all citizens. Its services promote democratic cohesion and make information accessible to everyone. This study offers compelling confirmation that the BnL is fulfilling this mission.

Shaping libraries as open meeting places and creative spaces for building digital skills is a valuable investment in the future. To me, the National Library is an indispensable part of Luxembourg's research and knowledge ecosystem.



Eric Thill Minister for Culture





Preface

Management of the National Library of Luxembourg

The National Library of Luxembourg (Bibliothèque nationale du Luxembourg, BnL) is the country's principal heritage, academic, and research library. It collects, catalogues, and preserves all printed and digital publications released in Luxembourg, as well as works published abroad that relate to the Grand Duchy. Collections also include posters, postcards, printed graphics, and valuable manuscripts. In addition to more than 1.8 million print publications, the BnL offers users a continuously growing range of databases, remotely accessible international electronic academic journals, scholarly e-books, digitised Luxembourgish works, and an archive of Luxembourg's web content. As the country's legal deposit library, the BnL is the largest library in Luxembourg.

Three years ago, we defined our values and strategic goals in our *Vision 2030*. Since then, we have launched forward-looking projects to systematically achieve these objectives. Now, the time has come to take stock. With the rapid pace of digitisation and the emergence of entirely new technologies, tools, and methods—especially in the field of artificial intelligence—we must regularly adapt our strategies. For this reason, we have, for the first time in our history, conducted a survey among our users and partner libraries. After all, they are always at the centre of our work.

The results of this survey reaffirmed our strategy. Users confirmed that the BnL's Vision 2030 fully aligns with their needs and with those of Luxembourg's knowledge society. Looking ahead, users expressed a strong desire for unrestricted remote access to both the web archive and the eluxemburgensia.lu digitisation portal, despite current copyright limitations. Nearly three quarters of users would like to see natural language functionality in the a-z.lu search engine. Two-thirds of our partner libraries identified the development of an Al-assisted cataloguing tool as a high priority. This indicates that the secure and effective use of artificial intelligence will be a key success factor for the BnL as part of Luxembourg's research infrastructure and knowledge ecosystem and should be further developed going forward.

96% of our users are satisfied with the services offered by the BnL—with 84% rating them as excellent and 12% as very good. Based on their experiences, they would recommend using the BnL. 84% of users value the free access to the BnL's extensive repositories, which saves them from relying on other information providers. This gives us a competitive edge. The BnL's user satisfaction index stands at 94 out of 100 points well above the average for other sectors. The survey has clearly validated our strategy and priority setting for the future. We sincerely thank all participants for their valuable input to the further development of the BnL. We were especially impressed by the praise and huge amount of detailed suggestions shared in the many open-ended responses. We will carefully analyse this feedback and adapt our strategy accordingly. We look forward to continuing and expanding our direct dialogue with users.

We hope you find this publication informative and engaging.



Dr Claude D. Conter <u>Director</u> <u>National Library of Luxembourg</u>



Carlo Blum <u>Deputy Director</u> <u>National Library of Luxembourg</u>

Preface

bms marketing research + strategy

National libraries bear a central responsibility: they preserve cultural heritage and provide high-quality information to academia, business, and society. However, traditional services focused on printed materials are no longer sufficient. The digital transformation demands significant investments in new services to optimally support researchers, educators, and students. Especially in times of data fraud and fake news, libraries play an essential role: they provide trustworthy sources and verified, high-quality information. Yet, without sufficient financial resources, fulfilling this role becomes increasingly difficult.

Against this backdrop, it is crucial for public and academic libraries to demonstrate the financial value of their work to stakeholders. Budget cuts could severely limit their ability to deliver essential services. Therefore, it is becoming ever more important not only to describe the value of libraries qualitatively but also to quantify it in concrete monetary terms. In the past, libraries were primarily assessed based on qualitative factors—through interviews, expert opinions, and professional evaluations. But how much is a library actually worth to its society? What economic return does it generate for the state?

To answer these questions, the well-established Contingent Valuation Method was applied—an empirically grounded approach that has been used worldwide since the 1980s and is even recognised as evidence in U.S. courts. Developed by Nobel Prize-winners, this method provides public institutions with an objective basis for quantifying their economic value.

The results speak for themselves: If funding for the BnL were to cease, Luxembourg's economy and society would incur a loss of \in 29.34 million. Put differently: for every euro the BnL receives, it generates \in 3.34 for Luxembourg's knowledge society. With an annual subsidy of approximately \in 8.79 million, the BnL generates an impressive \in 38.13 million for the knowledge society—thus creating a significantly higher return than its operating costs.

We are pleased that the National Library, together with us, is pioneering new approaches to value assessments for knowledge institutions in Luxembourg. Our sincere thanks go to the BnL for the constructive and trusting collaboration.

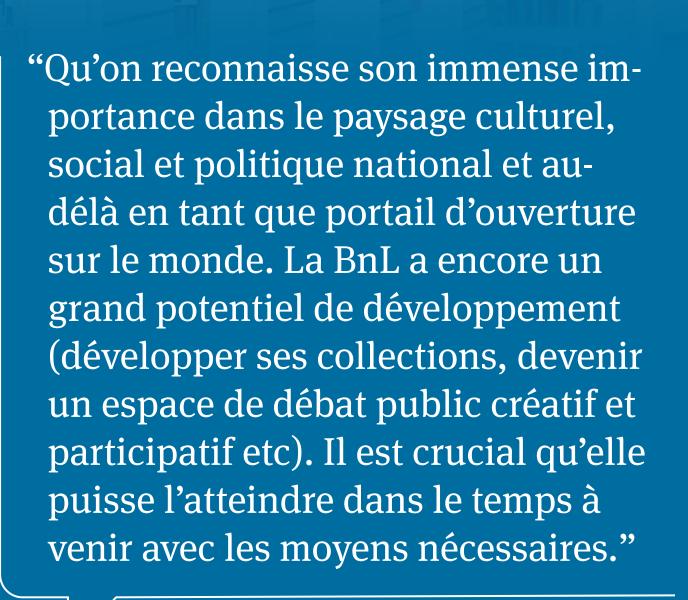
bms marketing research + strategy



Peter Kurz Senior Vice President Innovations & Methods



Dr Sabine Graumann <u>Vice President Information &</u> <u>Library Consultancy</u>



At a glance

Facts, figures and data



rate the BnL's services as excellent



With **€8.79 m** in public funding, the BnL generates

€38.13 m





The BnL is worth 3.34 times more than it costs to operate in case of loss of the BnL



76% of partner libraries would be "significantly impacted"



96%

would recommend the BnL

72%

spend less than €20 per month to use the BnL's services



Management Summary

A survey of 2,166 participants conducted by bms marketing research + strategy in early 2025 confirms: as Luxembourg's largest library, the BnL is a sound investment.

Respondent characteristics Private individuals account for the largest group of respondents at 66%, followed by students (13%). Five percent of participants are employees of BnL's partner libraries, museums, or archives. Half of the respondents are between 36 and 65 years old. 62% are employed. They are highly educated: 74% hold a university degree. 88% are based in Luxembourg and are multilingual. 93% speak English, 92% French, and 62% Luxembourgish. 96% of respondents are registered with the BnL.

Frequency of use 54% are regular users who have been with the BnL for more than four years. 32% registered within the past one to three years. 12% are new users who joined within the last twelve months, indicating that the library's offerings are seen as useful and that the BnL enjoys a strong reputation as a reliable research partner.

Usage intensity 55% used BnL services in the last month. 79% visited the BnL in person in the past year. Among online users, 73% use the a-z.lu search engine and 72% the library's homepage. Content analysis shows that the BnL's diverse collections fully reflect the wide-ranging interests of its users. **Strong user loyalty – clear competitive advantage** 96% of users are satisfied with the BnL. 84% rate the services as excellent, with 38% describing them as outstanding and 46% as very good. 12% rate them as good. 96% would recommend the BnL, with 82% doing so without reservation. 84% consider the BnL a significant competitive advantage, and 39% even call it "very significant". 73% especially appreciate the easy, free access to all collections. The BnL's satisfaction index stands at 94 out of 100—an outstanding result compared to other sectors, where the top benchmark in education is only 56.

Vision 2030 confirmed Libraries and users agree that free and easy access to all printed and digital collections is a key responsibility of the BnL (99% of libraries, 97% of users). For users, guaranteed, long-term access to information for everyone is even more important (98%). Libraries consider both the curation of cultural heritage and access to collections equally important (99% each).

Management Summary

Low access barriers Nearly half of the users access BnL services for less than 30 minutes a day, while 12% spend more than two hours daily. 72% spend less than €20 per month to use the BnL. The BnL's strategy is to provide free access to all collections.

The BnL's value is undisputed 71% of users would be affected if the BnL were no longer available. Among libraries, this figure rises to 76%, which underscores the BnL's close cooperation with its bibnet.lu partner network and its role as essential infrastructure. A third of users foresee no or only a small increase (up to 25%) in their workload if the BnL were to close.

Price elasticity in case of fees 35% of users would not change their behaviour if usage fees were introduced. 44% would reduce their use by up to 75%. 20% would stop using the BnL altogether.

Willingness to contribute financially 59% of registered users are willing to voluntarily contribute to support the BnL. Among researchers and educators, this figure rises to 74%. Overall, 17% reject regular contributions. 62% believe the BnL should be publicly funded. 58% think use should remain free of charge. For 18%, private payment is not worthwhile. 27% cannot afford usage fees. Even when asked directly, 19% would not be willing to pay more. Partner libraries particularly affected If the BnL could no longer provide its usual services to the partner network, the libraries would incur costs of €18.85 million to take over these services themselves.

High compensation demands from the state If public funding were withdrawn, users would expect the Luxembourg government to compensate them at many times their current usage costs. Partner libraries alone would request €58,850 per month per library. They estimate the costs resulting from the loss of BnL services as extremely high.

The added value For every euro of public funding, the BnL generates €3.34. In other words, it is 3.34 times more valuable to its users than it costs. With €8.79 million in funding, the BnL generates €38.13 million in value for Luxembourg's knowledge society. Conversely, without investment in the BnL, the knowledge society would face annual losses of at least €29.34 million.

What users want for the future Users want unrestricted access to the web archive portal (77%) and to the eluxemburgensia.lu digitisation portal (69%). 75% would like natural language input for the a-z.lu search engine. Two-thirds of partner libraries prioritise the development of an AI-powered cataloguing assistant. Other wishes include the expansion of the collection, longer opening hours, more work and seating spaces, AI-supported search queries, interlibrary loan services, and targeted event promotion.



of users would be willing to pay if the BnL were no longer available

58%

think **use** should **remain free of charge**



€58,850



monthly compensation claim from each library



of users believe that **ensuring** long-term access to information for all is the BnL's most essential role

CHAPTER 1 Objectives of the study

Objectives of the study

In a time when knowledge institutions are increasingly required to justify their funding, libraries too face the challenge of demonstrating the societal and economic value of public investment. This involves not only proving the need for library funding but also assessing the economic impact of public spending.

This study examines the economic contribution of the National Library of Luxembourg (BnL) and its role in strengthening Luxembourg as a hub for research and scholarship. The goal is to quantify the library's added value for economic and cultural development and to provide a solid foundation for strategic decision-making.

At the end of 2024, the BnL commissioned the market research institute bms marketing research + strategy to conduct an online user survey. Three main objectives were defined:

1. Analysis of respondent and user groups and their expectations

The study identifies the profile of respondents and BnL users, their satisfaction with the services offered, and how frequently they use them. It also examines the extent to which the BnL fosters user loyalty and its importance to Luxembourg's academic landscape. Another focus was placed on users' future wishes and expectations for the National Library.

2. Assessment of individual costs and willingness to pay

Users estimated their financial expenditure for using the BnL under various scenarios: their current costs, the potential cost of alternative services, and their acceptance of possible fees or price increases. In addition, the study analysed whether users would be willing to pay, and to what extent, either personally or through state compensation, if the BnL were no longer available. "Fahren Sie fort. Man merkt die letzten Jahre die starke und innovative Entwicklung der BnL."

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3. Quantification of economic and societal value

Using the Contingent Valuation Method, the BnL's financial value was calculated in euros. The data gathered in point (2) formed the basis for these calculations. The objective was to empirically demonstrate that public investment in the National Library produces measurable societal and economic benefits.

The online survey took place from January to March 2025. The results presented in this report are based on 2,166 completed questionnaires in four languages. The average interview duration was 14 minutes. The questionnaire comprised 40 questions. The evaluation of responses was carried out anonymously.

CHAPTER 2 Respondents and users of the BnL

2.1 **Respondent characteristics**

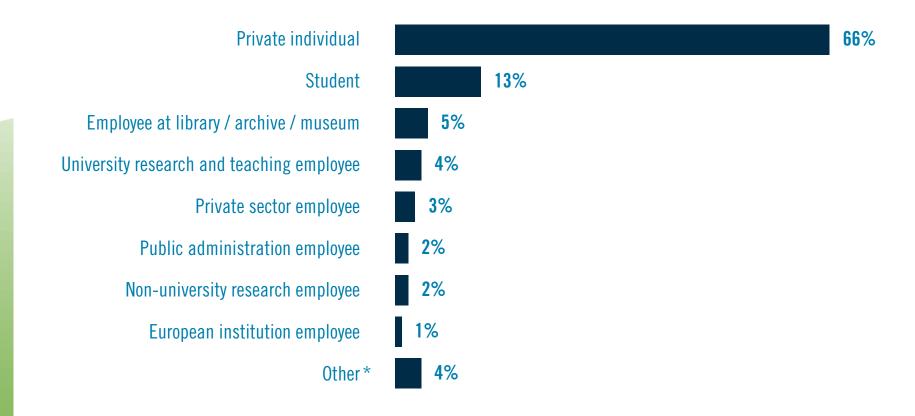
To begin with, structural data on the respondents were collected. The aim is to categorise them by function, age, employment status, level of education, place of residence, language skills, and use of the BnL.

Function Private individuals make up the largest share of all respondents, accounting for 66%. Students represent 13% of the survey participants. 17% are employed in various professional fields. Just over five percent (5.3%) are colleagues from BnL partner organisations such as libraries, archives, or museums. Employees from university research and teaching make up 4% —twice the share of those from non-university institutions within the total sample. Respondents also include 3% each from the private sector and public administration, with 1% coming from European institutions. Additionally, 4% of participants are job seekers. The group also includes a notable share of self-employed professionals such as authors, journalists, artists, translators, and medical professionals or teachers.

Fig. 01: Respondent characteristics: use by function

In which capacity do you mainly use the BnL?

total respondents: n = 2,166



* authors, unemployed people, bookbinders, journalists, artists, doctors, self-employed people, school teachers, translators

2.1 **Respondent characteristics**

Age Half of the respondents are between 36 and 65 years old. Of these, one third (33%) are aged 36 to 50, and one quarter (27%) are between 51 and 65. Nearly half of the respondents working in research and teaching, the private sector, and public administration—and 56% of those employed in partner libraries—fall within the 36 to 50 age range. It was also found that 13% of those working in non-university research and teaching are over the age of 65.

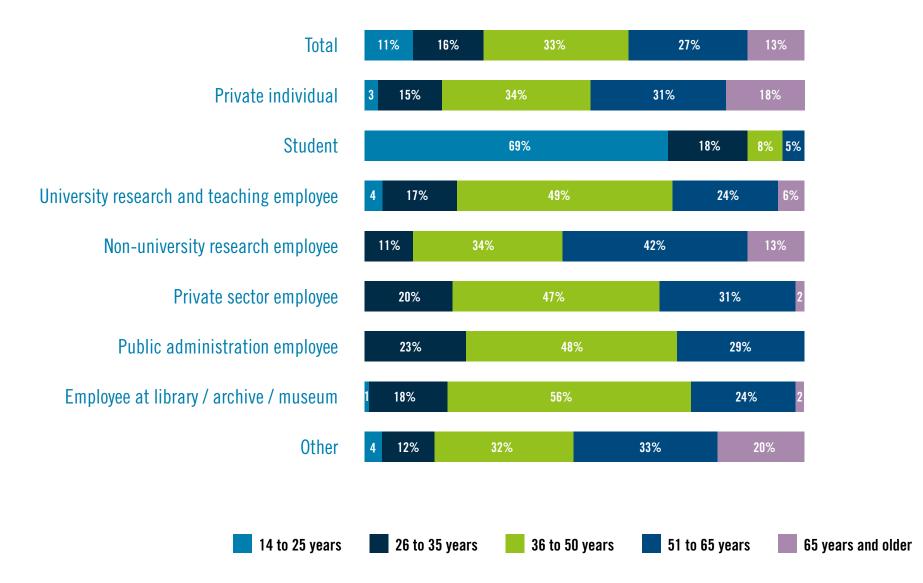
BnL services are accessible to users aged 14 and above upon registration. Eleven percent of participants are between 14 and 25 years old, which accounts for 69% of the student respondents as expected. Aside from university-level research and teaching, this youngest age group is not represented in any of the other professional categories. 16% of survey participants are aged 26 to 35, and 13% are 65 years or older.

Fig.02: Respondent characteristics: distribution by age and function

How old are you?



total respondents: n = 2,166



Employment status 62% of respondents are employed, with 48% working fulltime and 14% part-time. This is an indicator of the BnL's importance as an institution for continuing education and lifelong learning. 21% of participants are retired. Eleven percent are pupils or students, and six percent are jobseekers.

Most full-time employees work in public administration (85%), followed by 79% in university-level research and teaching, and 73% in the private sector. One third of part-time workers (31%) are employed in libraries, archives, or muse-ums. Among students, 11% work full-time and 14% part-time.

Level of education Respondents are highly educated: 74% have a university degree. Another 18% hold a secondary school diploma, and 3% are still in vocational training or education. Three percent have no formal qualification. The survey confirms that while the BnL is primarily an academic library, it also successfully reaches other target audiences.

Place of residence 88% of respondents reside in Luxembourg. Of these, 47% live in Luxembourg City, 19% in the south, 12% in the east, and around ten percent in the north of the country. Ten percent live in the Greater Region—that is, in Lorraine, Rhineland-Palatinate, Saarland, or Wallonia. Two percent live outside these regions. The results suggest that BnL services are still relatively unknown among cross-border commuters.

Language skills Many respondents are multilingual. 93% speak English, 92% French, 70% German, and 62% Luxembourgish. 44% speak additional languages, including Italian, Spanish, Portuguese, Dutch, Icelandic, Danish, Swedish, and Polish. Some participants also reported proficiency in Arabic, Croatian, Bulgarian, Chinese, Japanese, and Russian.

66%



of respondents are **private individuals**



74%

of respondents are highly educated



62% of respondents are employed

88%



of respondents reside in **Luxembourg**

2.2 Frequency of use

This section first determines how many respondents are registered with the BnL. It then analyses the share of long-term and new users, as well as usage and visit frequency. The goal is to identify the proportion of "power users" in order to appropriately weight their impact in the subsequent value calculation compared to less frequent users.

BnL users 96% of all respondents are registered with the BnL. Three percent are not registered, and one percent no longer use the BnL. The following analyses are based exclusively on the responses of the 2,080 registered users; non-users were not included.

Breakdown of long-term and new users 54% of BnL users have been registered for more than four years and are therefore considered long-term users. User loyalty is high. In the past year, 12% of users were newly acquired. 32% have registered with the library within the last one to three years.

Most long-term users are found in non-university research and teaching (84%), university research and teaching (76%), and partner libraries (81%). Most new users are students or employees from the private sector.

On-site usage frequency 55% of users accessed BnL services during the survey month—either by using the reading room, borrowing materials, or conducting online research. Intensive users include staff from university research and teaching (66%), the private sector (64%), and libraries (59%), who primarily use the BnL's wide range of services on a monthly basis. Usage intensity is lower among public administration employees (48%).

More than a quarter (27%) of users reported having last used the BnL's services around six months ago. For 7%, the last use was about a year ago. 5% stated that their last interaction with the BnL was more than a year ago.

On-site visit frequency 79% of surveyed users visited the BnL in person in the past year. 21% did not visit the library on-site. Students (89%) and private-sector employees (86%) had the highest on-site visit rates.

57% of users visit the National Library regularly. 28% come monthly, 9% several times a week, and 8% once a week. Students are the most frequent visitors: 33% visit the BnL at least once or several times a week, as they find it a productive and quiet place to study. 30% of employees from partner libraries visit the BnL once or several times a week.





96%

of respondents are registered users

54%

have been

registered for more

than four years

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55%

assessed BnL

services during the

survey month

79%

visited the BnL

in person last year

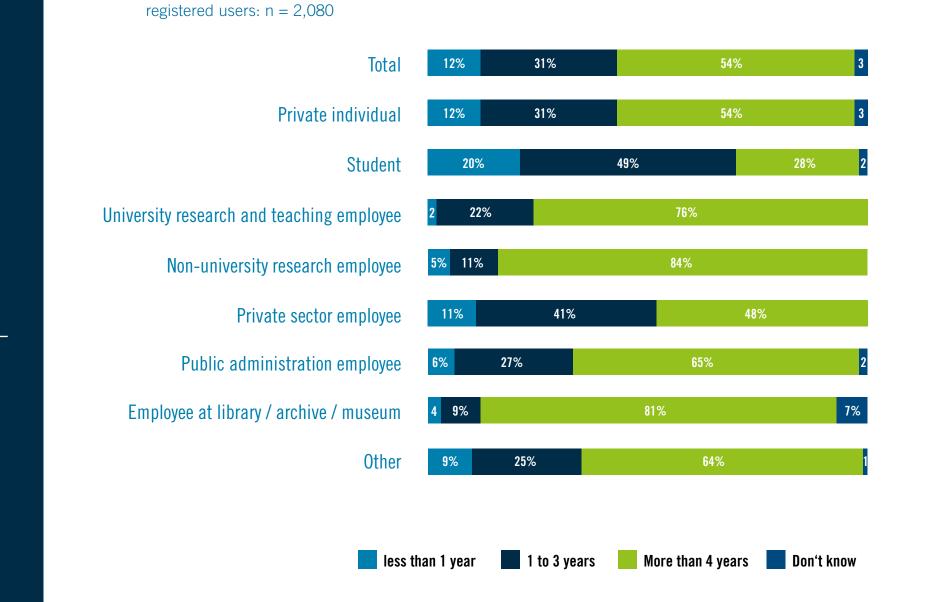


Fig.3: Usage intensity: distribution by time and function

When did you last use a BnL service?

In which capacity do you mainly use the BnL?

12% of users visit the BnL several times a month. 30% come at least once every six months. This is true for every second employee in non-university research and teaching. 13% have lower information needs and visit the BnL less than once every six months. It is important to note that researchers are not necessarily required to visit the library in person, as they primarily use its online services.

2.3 Demand for services and offerings

This chapter analyses the use of on-site and online services as well as users' subject interests in order to gain a precise understanding of their needs.

Subject area interests The National Library holds an extensive collection of physical and digital resources that meet the information needs of its users.

User interests are diverse. The most frequently borrowed materials fall under "History and Geography" (34%). One quarter (26%) prefer literature and fiction. Nearly one fifth of users are interested in "Philosophy and Psychology", "Languages and Linguistics", "Art and Architecture", and "Computer Science, Information, and Knowledge", respectively. Other popular topics—each attracting more than ten percent of users—include "Social Sciences", "Music, Sports, and Leisure", "Natural Sciences and Mathematics", "Political Science", "Economics", "Technology and Engineering", and "Law". Respondents also explicitly mentioned interest in areas such as "Executive Coaching", "Astrophysics", "Stock Market", "Esotericism", "Climate Protection", "Risk Management", and "History of Science" as being particularly important to them.

"Préserver ce joyau : Je n'ai jamais vu une personne y venir sans être très investie dans une atmosphère qui favorise la réflexion, le travail et l'épanouissement personnel et dans laquelle gravite un personnel très compétent et à l'écoute."

The summer of th

JINTHEQUE

ENSEUR

17%

"Für mich gibt es in der BnL noch viel zu entdecken. Ich bin sehr zufrieden mit allem, was die BnL bietet."

Fig. 04: Follow-up question: user interests by subject area

Which subject area do you mainly borrow documents (physical and digital) for?

egistered users: $n = 2,080$			
History and geography	34%	Political science	13%
Literature	26%	Economics	12%
Philosophy and psychology	20%	Technology and engineering	11%
Language and linguistics	19%	Law	11%
Art, architecture	19%	Education	9%
Computer science, information and knowledge	19%	Medicine	7%
Social sciences	18%	Religion	6%
Music, sports, leisure	16%	Agriculture	2%
Natural sciences and maths	14%	Other *	17

* archaeology, astrophysics, accounting and finance, stock markets, executive coaching, esotericism, healthcare/wellness, real estate, climate protection, fashion, management, marketing, news, nanotechnology, paleanthropology, project management, risk management, sports, science, statistics, tax law, travel guides, web design, history of science

The findings clearly show that the National Library's broad collection fully meets the diverse interests of its users.

2.3 Demand for services and offerings

Reasons for visiting When users come to the BnL, they benefit from a wide range of on-site services.

Nearly half visit the BnL to use printed documents (48%) or to spend time in the reading room (47%). Other frequently cited reasons include studying in a quiet environment, browsing the collection, making copies, scanning, borrowing items, using interlibrary loan services, reserving group study rooms, accessing the music room or audio booths, or donating documents to the library.

One third of visitors use the self-service borrowing or return machines (34%), consult academic and specialist literature (31%), or attend events (29%). 29% also visit the library café.

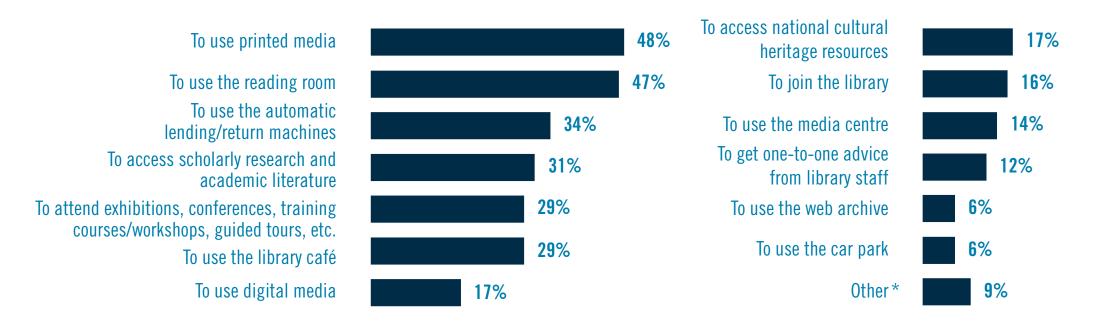
Around 17% use digital media or take advantage of on-site, unrestricted access to the national cultural heritage. 16% register as new users, 14% use the media centre. Twelve percent visit the National Library for in-person assistance from expert staff. Six percent each use the web archive or the on-site parking facilities.

Fig. 05: Follow-up question: main reasons for visiting the library in person

Why did you visit the BnL in person in the last year?

Multiple answers possible

registered users: n = 1,653



* Working and learning in complete peace, browsing the collection, printing or scanning documents, borrowing/interlibrary loan, group study rooms ("carrels"), music room or family room, delivering document donations

"Ich bin wirklich begeistert von dem bestehenden Angebot – allein der Zugriff auf Zeitungen und Zeitschriften – ob nun im Freizeitbereich oder in der Fachliteratur – ist unglaublich wertvoll."

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THE CONSTRUCTION STATUS

1

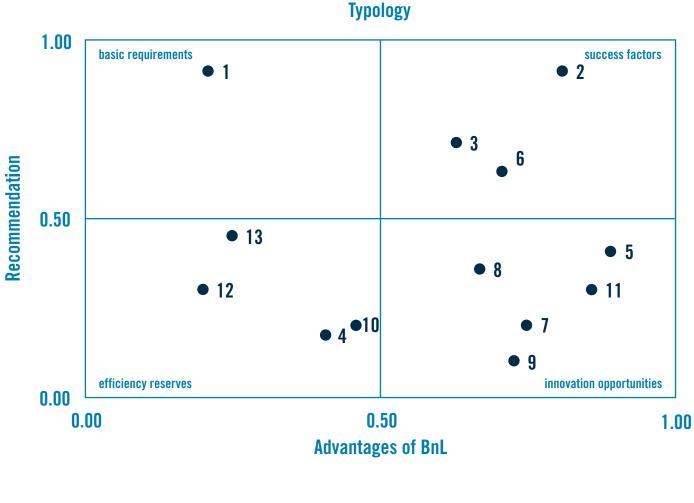
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User loyalty based on on-site services This figure illustrates the extent to which individual service offerings of the BnL (x-axis) correspond with users' willingness to recommend the library (y-axis). The result is a so-called four-quadrant matrix, from which targeted recommendations for actions can be derived for the BnL.

Fig. 06: Follow-up question: user loyalty by on-site services

Why did you visit the BnL in person in the last year? Based on what you experience, would you recommend BnL's services to friends or colleagues?

library users: n = 1,653



1 To join the library

- **2** To access national cultural heritage resources
- **3** To access scholarly research and academic literature
- **4** To use printed media
- **5** To use digital media
- 6 To use the media centre
- 7 To use the reading room

- 8 To use the web archive
- **9** To use the automatic lending/return machines
- **10** To get one-to-one advice from library staff
- **11** To attend exhibitions, conferences, training courses/workshops, guided tours, etc.
- **12** To use the library café
- **13** To use the car park

"Außergewöhnliche Dienstleistungen: Wir haben das unglaubliche Glück, einen solchen Service zu haben, und das Personal ist auch immer so kompetent und freundlich, danke!"

Particularly interesting are those services that score lower in recommendation rates but have a strong impact on user retention—these represent valuable **innovation opportunities**. Such offerings should not only be expanded, but also clearly communicated as part of the BnL's portfolio. These include the use of digital media, the web archive, the reading room, and the automatic lending and return machines. Interest in attending exhibitions, conferences, training courses, workshops and guided tours is also notable—many users highlighted these offerings as well.

Clear **success factors** include access to the national cultural heritage resources, to academic literature and scholarly research, and to the media centre. These achieve both high recommendation rates and deliver a significant added value for the library—and should therefore be continuously promoted and strengthened¹.

By contrast, users deem the car park and the library café less essential—here, if necessary, cost savings could be made most easily without significantly affecting user satisfaction. It is worth noting, however, that the car park is considered less essential, as the tram stops right at the BnL's doorstep. As expected, the provision of printed media is decreasing, with the focus shifting increasingly towards digital formats. One-to-one advice from the library staff is often taken for granted, it nonetheless holds untapped potential. Through targeted communication, greater awareness of the value of this service could be created—points like these are referred to as **efficiency reserves**.

Also positively highlighted is the registration process: while naturally a **basic requirements**, it is also rated very highly in terms of satisfaction and willingness to recommend.

> ¹ Since the end of the survey, the media centre's services have been expanded to include the lending of playback devices such as DVD and CD players—an addition that certainly aligns with user expectations.

Use of infrastructure in the reading room In the reading room, 50% of users benefit from access to the extensive document collection. 49% use the free Wi-Fi, and 40% make use of the work-stations. 19% use computers, copiers, or scanners. The technically well-equipped group rooms, known as carrels, are used by 15% and are fully booked year-round. Audio booths are used by 6% of users, while 4% each make use of the music room and the rare books reading room.

Frequency of use of remote services Naturally, the National Library's services can also be accessed online, outside of the building.

About three quarters of online library users (73%) access the a-z.lu search engine—a central online service of the BnL. 72% access the library's homepage as the main entry point for online use.

"Ausgezeichnete Organisation und Dienstleistungen!"

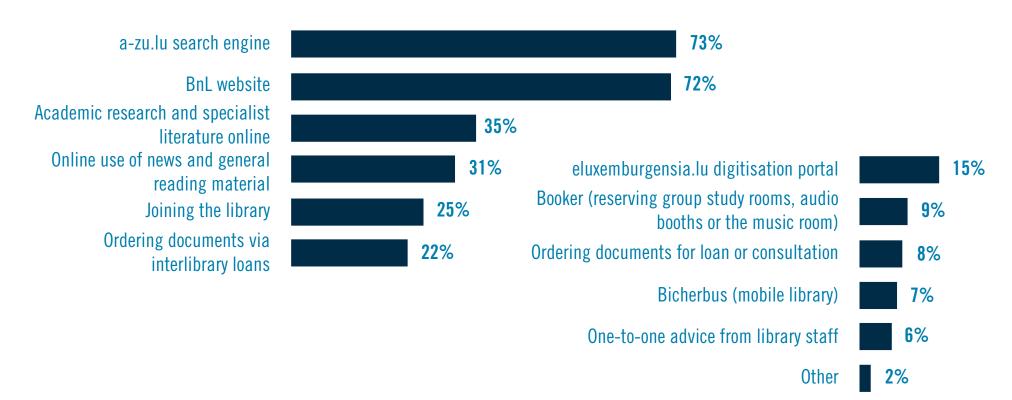
"Ich bin sehr zufrieden mit dem Angebot der BnL und all ihren Initiativen."

Fig.07: Follow-up question: online use of BnL services

Which remote services and offerings have you used in the last year?

Multiple answers possible

registered users: n = 2,069



35% use the online services for academic literature such as journals, commercial databases, or e-books. 31% read leisure literature online. 25% register online, and 22% order materials for on-site use or borrowing. 15% use the eluxemburgensia.lu digitisation portal, which transforms Luxembourg's printed cultural heritage into digital form. 9% reserve group study rooms, audio booths, or the music room. 8% use interlibrary loan services, and 6% receive consultation by email or phone. The "Bicherbus"—a mobile library—is used by 7% of respondents. It operates 15 weekly routes across Luxembourg and serves more than 80 locations.

User loyalty in the context of remote-service usage As in Figure 6, the four-quadrant matrix in Figure 8 provides concrete strategic recommendations for the BnL—this time focusing on services used outside the library building.

Clear **success factors** in this area include the online access to specialist and academic literature, as well as access through the a-z.lu search engine. Both services offer high added value for users and should be further developed and actively promoted.

Innovation opportunities are evident in services such as digital reservation of workspaces and carrels via the "Booker" tool, as well as in the expansion of the "Bicher"Danke an die Bibliothek für den Zugang zu den Büchern und den wissenschaftlichen Werken."

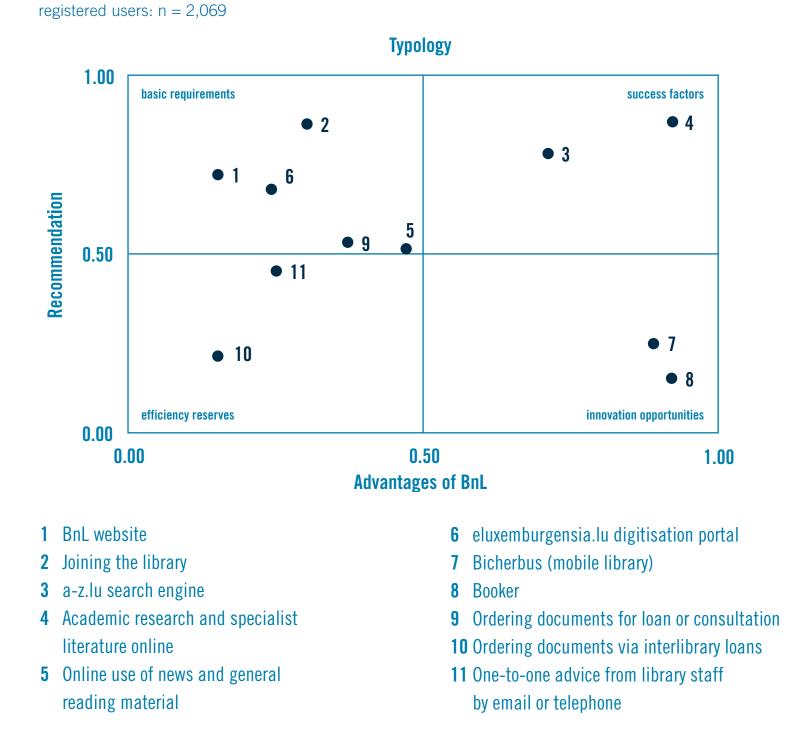
bus" (mobile library). These measures could improve access to library services outside the physical building and enhance user convenience.

Efficiency reserves By contrast, the option to order documents via interlibrary loan is viewed less favourably. Many users no longer consider it a strong added value for the BnL, which—given the growing availability of digital content—may be a reason to reconsider or adjust this service. However, it's important to note that researchers still make active use of this offering.

One-to-one advice from the library staff, including in the online context, is appreciated by many but, according to the survey, contributes only modestly to users' willingness to recommend the library. It is rarely seen as a unique feature of the BnL. Interestingly though, the open comments often praise the friendliness and helpfulness of staff—an indication that better communication around this service could increase awareness and appreciation.

Fig.08: Follow-up question: user loyalty in online use of services

Which remote services and offerings have you used in the last year? Based on what you experience, would you recommend BnL's services to friends or colleagues?



Basic requirements for online use include access to the BnL website, the eluxemburgensia.lu portal, the ability to read news and general reading material, and the option to order documents online for borrowing. As in other areas, registration is once again considered a basic requirement and is consistently rated positively—indicating no current need for action in this regard.

31

2.4 User satisfaction

The aim is to assess users' overall satisfaction with the BnL. Satisfaction is measured by the overall evaluation of the BnL and by users' willingness to recommend it. In addition, users were asked to evaluate the BnL's competitive advantages and other benefits.

96% of users are satisfied. 84% rate the BnL's services as excellent, with 38% describing them as "outstanding" and 46% as "very good". Satisfaction is highest among employees in non-university research and teaching (47%), university-level research and teaching (45%), the private sector (42%), and public administration (45%).

27% of the 730 responses to the open-ended question "Suggestions and requests" included words of thanks, praise, or appreciation for the BnL. The detailed comments cited alongside this report reflect the high level of user satisfaction and engagement with the BnL's offerings and services. The BnL is recognised for its extensive collections and easy access to them.

Key advantages of the BnL Three quarters (73%) of respondents say that access to the extensive and attractive collection is easy, free of charge, and reliable. 60% consider the BnL's holdings comprehensive and appealing, and 48% appreciate the ease of access to the collections. Every second respondent praises the library's inspiring atmosphere. 35% find the infrastructure and further facilities particularly helpful.

Around one third of users value the exclusive access to academic and specialist literature, the ongoing preservation and curation of cultural heritage, and the swift, reliable delivery of documents. About one in five users visit the library to receive personal consultation from expert staff. Similarly, about 20% see the BnL as a safe and welcoming space to meet like-minded people and exchange ideas.

Additional reasons mentioned include the easy and free access to the library repositories, the quiet environment of the reading room, the extensive digital (subject-specific) information offerings, the programme of conferences and exhibitions, and the friendliness of the staff.



are **satisfied**





appreciate the easy, free and reliable access to all collections



consider the **BnL** as a **competitive advantage**





Satisfaction index well above the average in other sectors

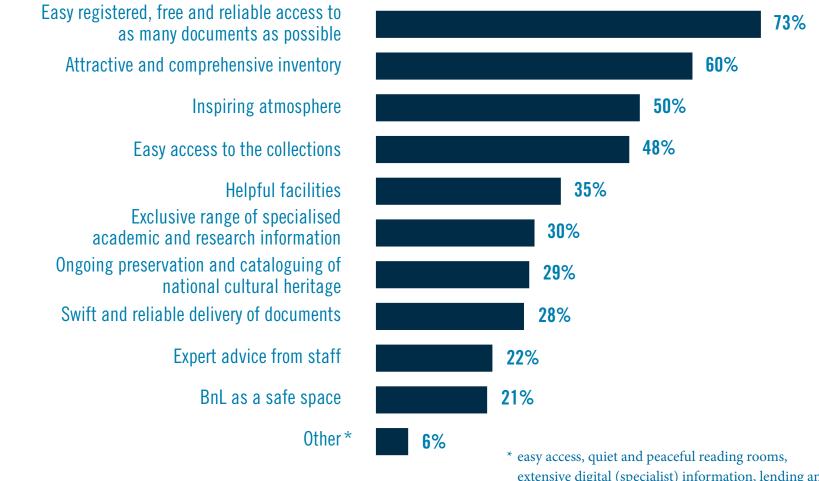
"Die BnL muss ein öffentlicher Dienst bleiben. Die BnL muss eine Bibliothek bleiben."

Fig. 09: The special advantages of the BnL

What do you value most about the BnL?

Multiple answers possible

registered users: n = 2,080



extensive digital (specialist) information, lending and return machines, book bus service ("Bicherbus"), conference and exhibition offerings, friendly staff

Competitive Advantages 84% of users see the BnL as a significant competitive advantage over other information providers, with 40% describing this advantage as "very strong". 13% do not perceive any notable competitive edge. Only 2% rate the advantage as "low", and 1% do not see any advantage at all.

92% of staff in non-university research and teaching consider the BnL's competitive advantage particularly high, indicating that the BnL represents a unique value proposition for this group. This view is shared by 87% of employees from partner libraries.

2.4 User satisfaction

Use of other providers In the past twelve months, 64% of users searched for specialist information using search engines such as Google. 50% used bookstores or publishers, and 41% made use of AI tools such as ChatGPT, Mistral, or Claude.

39% contacted other libraries within Luxembourg, while 26% accessed foreign libraries. In addition, 20% used academic social networks like ResearchGate or Academia.edu, which connect researchers with similar interests.

12% directed their inquiries to professional associations or public authorities. 9% accessed shadow libraries like Sci-Hub, LibGen, or b-ok to obtain academic papers that are normally behind a paywall.

Other explicitly named sources included Amazon, antiquarian bookshops, archives, YouTube, personal collections, various online databases for subject-specific information, Sci-Finder, and general social networks.

Furthermore, users were asked whether they would recommend the BnL's services to friends or colleagues based on their experiences. "Ich gratuliere dem Großherzogtum Luxemburg, dass es die Kultur und den Zugang dazu nicht vernachlässigt."

Recommendation 96% of users would recommend the BnL to friends and colleagues—82% would do so "definitely" and 14% "probably." Particularly high recommendation rates are seen among employees in research and teaching, as well as in the private sector (each 88%) and public administration (84%). The share of users who would not recommend the BnL is just 1.2% —one of the lowest figures ever recorded.

The Net Promoter Score (NPS) measures the willingness to recommend by subtracting the percentage of "detractors" (those unlikely to recommend) from the percentage of "promoters" (those who would).

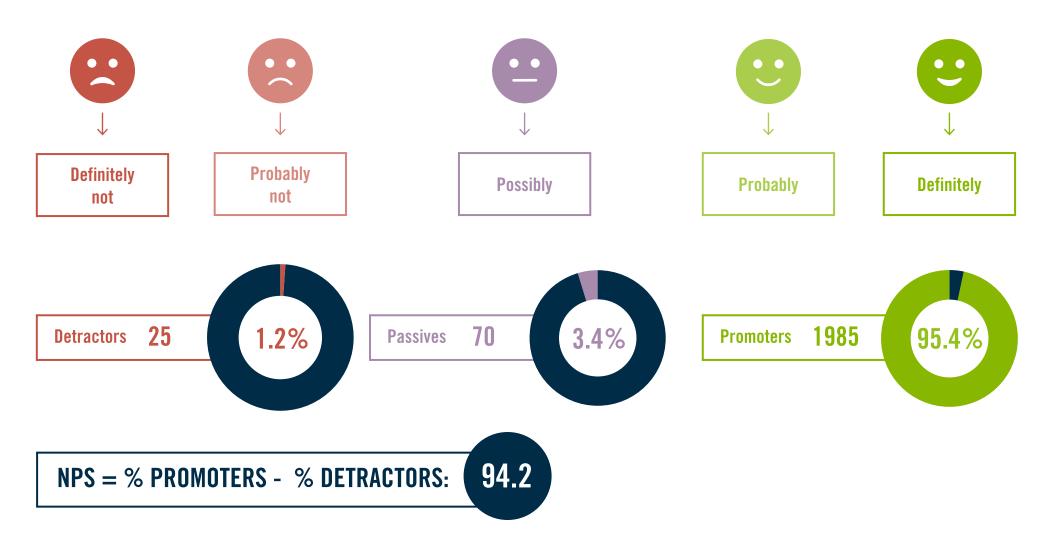
The BnL achieves an NPS of 94 out of 100 possible points—an outstanding result, with one of the lowest detractor rates ever recorded. This indicates an excellent relationship between the BnL and its users. The National Library enjoys a large base of highly satisfied and loyal users. Moreover, the index significantly exceeds that of other sectors. For comparison, the best benchmark in the education sector is 56 points, while the energy sector reaches only 8.

"For me it is one of the best places in Luxembourg. It has an incredible atmosphere, and it has only brought peace and inspiration to me."

Fig. 10: Overall user satisfaction according to Net Promotor Score

Based on what you experience, would you recommend the BnL's services to friends or colleagues?

registered users: n = 2,080

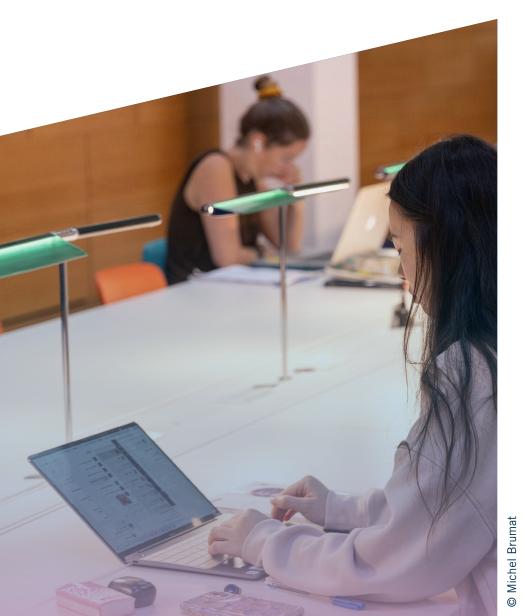


CHAPTER 3 The importance of the BnL for Luxembourg as a centre of knowledge and research

The importance of the BnL for Luxembourg as a centre of knowledge and research

The Bibliothèque nationale du Luxembourg (BnL) is a vital part of Luxembourg's knowledge society. The strategic core objectives that shape the implementation of *Vision 2030* are reflected in the following key responsibilities:

- The BnL fulfils the traditional missions of a library. It ensures unrestricted access to both printed and digital collections and contributes to the preservation of national cultural heritage through extensive digitisation efforts. It also supports research and teaching through Open Access to scholarly publications. In addition, the BnL operates the "Bicherbus"—a mobile library serving rural regions.
- The BnL is strengthening its role as a nationally and internationally connected infrastructure provider, developing and offering specialised services to support the research process in Luxembourg. It also supports the national library network by maintaining and further developing the shared IT tools used by the partner libraries.
- The BnL offers numerous opportunities for continuing education and promotes the training of professionals in information science. Furthermore, it provides space for dialogue, creative exchange, and collaboration.



"Die BnL ist der Ort, der mich am meisten motiviert zu lesen, zu lernen und mich zu verbessern. Ein großes Dankeschön."

37

Users and partner libraries in the bibnet.lu network were asked to evaluate the relevance of these core functions. Respondents were invited to assess the importance of the BnL's various responsibilities both from a personal perspective and in terms of their significance for Luxembourg's knowledge society.

The users rated the six tasks of the BnL based on the combined criteria of "very important" and "important", with the following priorities, both in terms of national research policy and personal relevance:

- 1 Guaranteed, long-term supply of information for everyone is considered most important—by 98% from a national perspective and by 97% on a personal level.
- 2 Easy access to all printed and digital collections, documents and media is seen as important by 97% in terms of research policy and by 96% personally.
- **3** Cost-free supply of freely accessible specialised scholarly and research literature is rated important by **97%** for Luxembourg as a research hub and by **95%** personally.
- 4 Preservation and digital curation of cultural heritage is valued by 93% from a national standpoint and by 91% on a personal level.
- 5 Educational and professional development opportunities, such as conferences, training courses, workshops, exhibitions, and guided tours, are considered important by 84% nationally and 77% personally.
- 6 The BnL's role as a safe space for interaction, personal exchange, and creativity is considered relevant by **79%** in terms of research policy and by **69%** from a personal perspective.

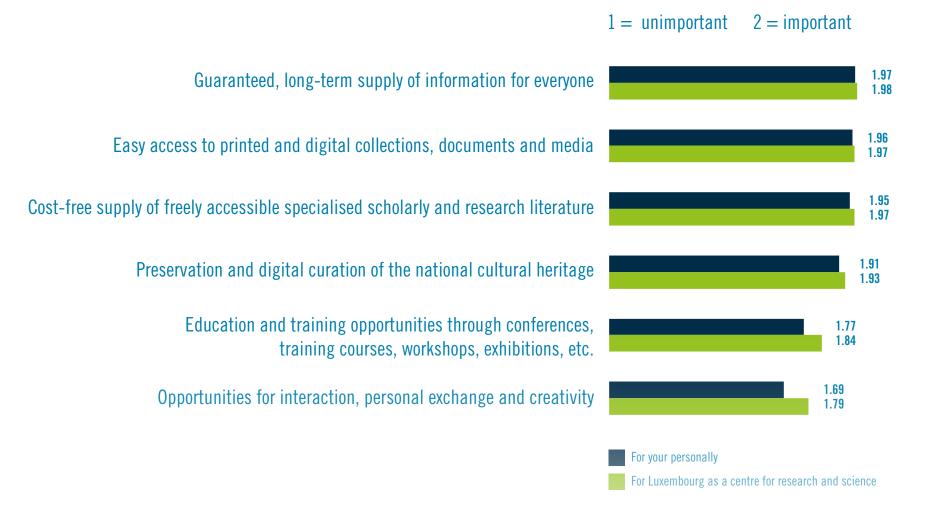
All responsibilities are considered more important by users from a national research policy perspective than from a personal point of view.



Fig.11: The importance of the BnL: user perspective in comparison

The BnL performs a large number of functions. For the following functions, please indicate how important you think they are for you personally and how important you think they are for the knowledge-based society in Luxembourg.

registered users excluding library staff: n = 1,964



Partner libraries were asked to assess three functions also evaluated by users: ease of access to all collections, cultural heritage preservation, and educational offerings. In addition, they were asked to evaluate four further tasks that the BnL performs specifically for the library network.



97%

of users consider easy access to printed and digital collections as important

97%



of users consider the cost-free supply of specialised research literature as important





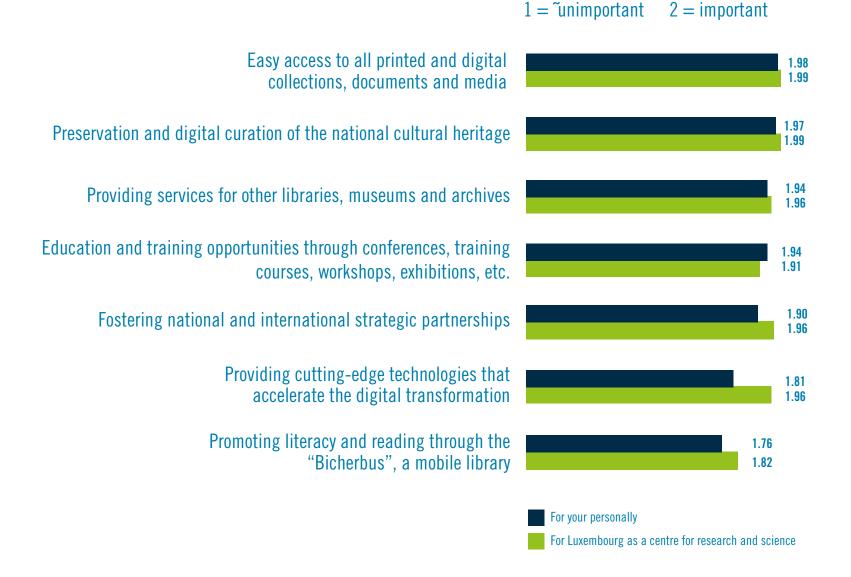
of libraries see the curation of the national cultural heritage as a central responsibility The libraries rated the BnL's responsibilities using the combined criteria "very important" and "important", resulting in the following prioritisation—both for Luxembourg as a centre of research and from a personal perspective:

- 1 The libraries unanimously agree that easy access to all printed and digital collections, documents, and media, along with the preservation and digital curation of national cultural heritage, are the two core responsibilities of the National Library for the research landscape (99% each). From an individual perspective, these aspects are viewed as slightly less important (98% and 97%, respectively). For librarians, cultural heritage preservation (+19 percentage points) and easy access to all collections (+18 percentage points) are rated significantly more relevant for the research landscape than they are by users.
- 2 Educational and professional development opportunities, such as conferences, training courses, workshops, exhibitions, and guided tours, are considered slightly more important from a personal perspective (94%) than from a national perspective (91%).
- **3** The provision of services to other libraries, museums, and archives is seen as important by **96%** from a national viewpoint and **94%** from an individual standpoint.
- **4** Fostering national and international strategic partnerships is rated much more highly in terms of research infrastructure (97%) than from the personal perspective of librarians (90%).
- **5 Providing cutting-edge technologies** that help accelerate digital transformation is seen as more important for Luxembourg as a research location (96%) than from an individual perspective (81%).
- 6 Promoting reading and literacy through the "Bicherbus" is seen as less relevant personally (76%) than from a national perspective (83%).

Fig. 12: The importance of the BnL: partner libraries in comparison

The BnL performs a large number of functions. For the following functions, please indicate how important you think they are for you personally and how important you think they are for the knowledge-based society in Luxembourg.

employees at a library / archive / museum: n = 114



The results from the surveyed partner libraries show that they often rate the relevance of the BnL's responsibilities even higher from the perspective of national research policy than from their own individual viewpoint. Only educational and training opportunities are considered slightly more important on a personal level than from a national perspective.

The surveyed users and partner libraries confirm that the BnL, with its *Vision 2030*, successfully meets both their needs and those of Luxembourg's knowledge society—and can confidently continue on its current path.

CHAPTER 4 Cost analyses under different scenarios

Cost analyses under different scenarios

Survey participants were presented with a variety of scenarios to assess how much they currently spend on the BnL and how much they would be willing to spend under changing conditions. These responses form the basis for calculating the BnL's economic value using the Contingent Valuation Method.

Unlike something deemed necessary, "contingent" refers to something that might happen, underlining uncertainty and dependency on possible future events. In the questionnaire, BnL users were asked to consider a hypothetical scenario: public funding for the BnL is discontinued, and there is a risk that the library may no longer be able to continue its operations. In this context, users were asked to answer five key questions regarding their usage intensity and current financial investment, their acceptance of potential price increases, the cost of switching to alternative providers, and their willingness to contribute financially or accept their compensation in such a case.

The questions assessed:

- > what costs users currently incur when using BnL services (Investment in Access/in Use), and
- what additional costs would arise if the BnL were to close and users had to rely on alternative information providers (Cost of Alternatives).

In addition, the survey explored:

- expected changes in user behaviour if fees were introduced or prices increased (Price Elasticity of Demand),
- the willingness to contribute financially to maintain the BnL, and the amount users would pay (Willingness to Pay), and
- the perceived individual loss in case of closure, and how much compensation users would expect from the Luxembourg state (Willingness to Accept).

Additional questions investigated why users might be unwilling to pay more and whether, upon reflection, they might be open to contributing after all. The key findings are presented in the following sections. Given the BnL's specific service offerings for partner libraries, separate results are shown and interpreted for libraries, museums, and archives. The following chapters analyse each of the above questions individually, before deriving the library's total economic value based on those results.

4.1 Current investment

At the beginning of the valuation process, participants were asked how much time they spend using the BnL and what financial resources they currently invest to access its services. The aim was to estalish a reference measurement that would allow respondents to engage realistically with the hypothetical scenarios presented later in the survey.

In response to the question regarding the amount of time spent using the BnL:

47% of respondents reported using the BnL for less than 30 minutes per day. 18% spend up to two hours daily, and 12% make use of BnL services for more than two hours each day. Among intensive users, this figure rises to 32% for library staff and 31% for students. In contrast, 58% of public administration employees, 53% of those in non-university research and teaching, and 52% of private individuals primarily use the BnL for less than 30 minutes per day. 23% of respondents were unable to estimate their daily usage. It is likely that users with shorter usage times found it difficult to provide an accurate estimate, especially since time spent accessing the library infrastructure (e.g. public transport) is often not taken into account.

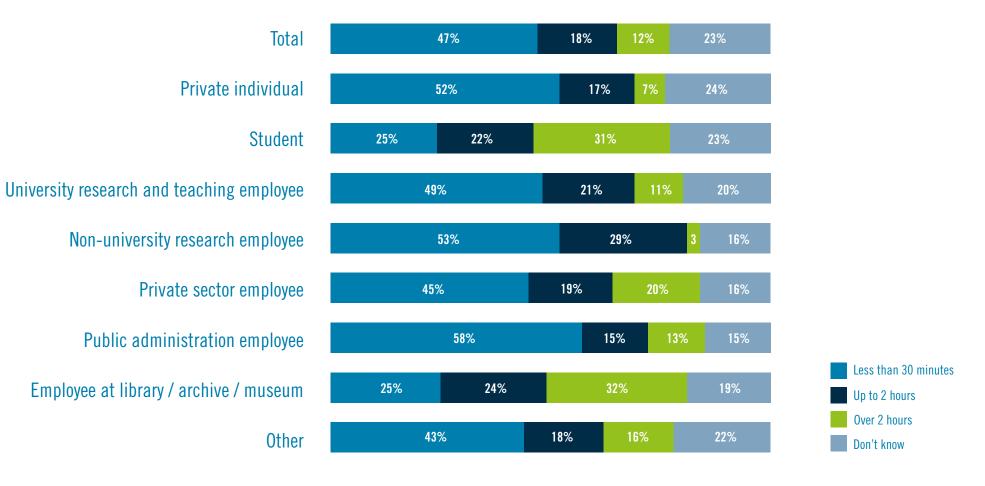


" Als Student und ohne eigenes Einkommen wäre es nicht möglich viel Geld für die Bibliothek auszugeben. Wäre die finanzielle Situation anders wäre ich bereit mehr auszugeben."

Fig. 13: Time required per day when using the BnL, by function

How much time do you spend each day using the BnL (facilities, services, etc.)? In which capacity do you mainly use the BnL?

registered users: n = 2,080



4.1 Current investment

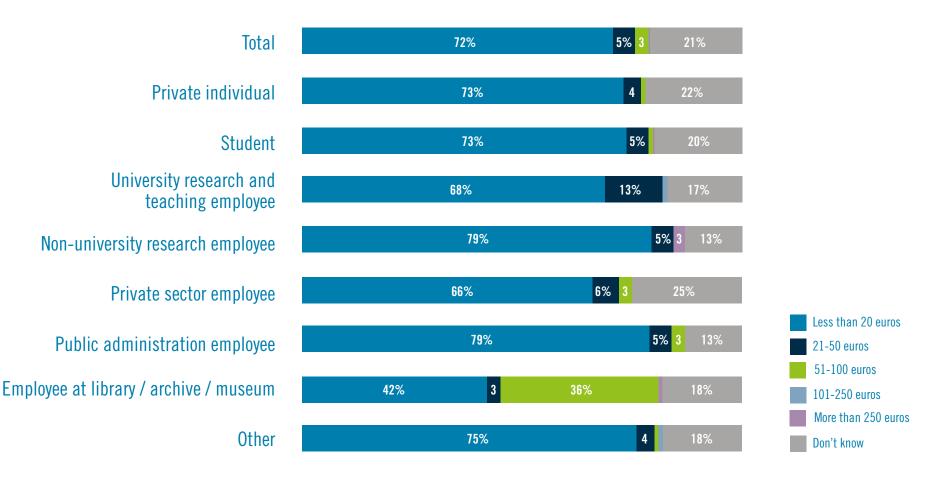
Investment in Access Furthermore, respondents were asked about their financial expenses (Investment in Access) associated with using the BnL. On average, users report very low monthly costs.

72% of respondents spend less than €20 per month on using the BnL. 5% report monthly expenses between €21 and €50. The most cost-conscious group are public administration employees, 79% of whom spend less than €20. Only four respondents in total reported spending €101 or more per month. 21% were unable to provide a specific estimate.

Given the BnL's strategic goal of providing free access to all printed and digital collections, user expenses must remain low overall. Costs may arise only for services such as printing, scanning, or interlibrary loans. Additionally, public transport in Luxembourg is free of charge, which eliminates potential travel expenses for most users.

Fig. 14: Monthly expenses for using the BnL, by function

How much do you spend on BnL services on average each month? Please include, for example, the cost of copying or scanning, the cost of interlibrary loans, the cost of travelling to the library, etc. In which capacity do you mainly use the BnL?



registered users: n = 2,080



"Als Rentnerin mit kleiner Pension bin ich gezwungen generell meine Ausgaben stark zu begrenzen. Kultur soll aber möglichst allen zugänglich sein, ohne das Geld als Diskriminationsfaktor fungiert!"

4.2 Costs of using alternatives to the BnL

Building on their current expenses, users were asked to estimate their additional burden—i.e. the Cost of Alternatives in the unlikely event that the BnL would no longer exist. They were also asked to what extent they would feel affected overall if the BnL were no longer available.

Respondents gave the following assessments:

- > 71% of users would be negatively affected if the BnL ceased to exist. 30% of respondents stated that their work would be "severely impacted". Due to the extensive range of services, the BnL provides to libraries, 76% of library staff would be the most strongly affected. Among university and non-university researchers and educators, 59% and 58% respectively also indicated they would be "strongly impacted", underscoring the BnL's importance for these user groups.
- > 41% of all respondents said their work would be "somewhat impacted". This view is shared by 51% of students, who also have access to alternative resources such as the Luxembourg Learning Center.
- > 30% of users said they would "not be affected at all", including 40% of private individuals.

In the hypothetical case of the BnL closing, users would expect the following additional burdens—i.e. Cost of Alternatives in terms of increased working time:

- > 32% would expect up to a 25% increase in working time. Among non-university researchers, this figure rises to 50%, and to 41% among university researchers and educators.
- > 11% of library staff would expect their working time to double, while 15% even foresee an increase of more than 200%.
- > 33% believe their workload would remain unchanged.
- > 26% of students and 25% of private-sector employees would expect a 26% to 50% increase in effort, well above the average of 17%.





of users would be negatively affected if the BnL were no longer available

32%

of users would expect up to





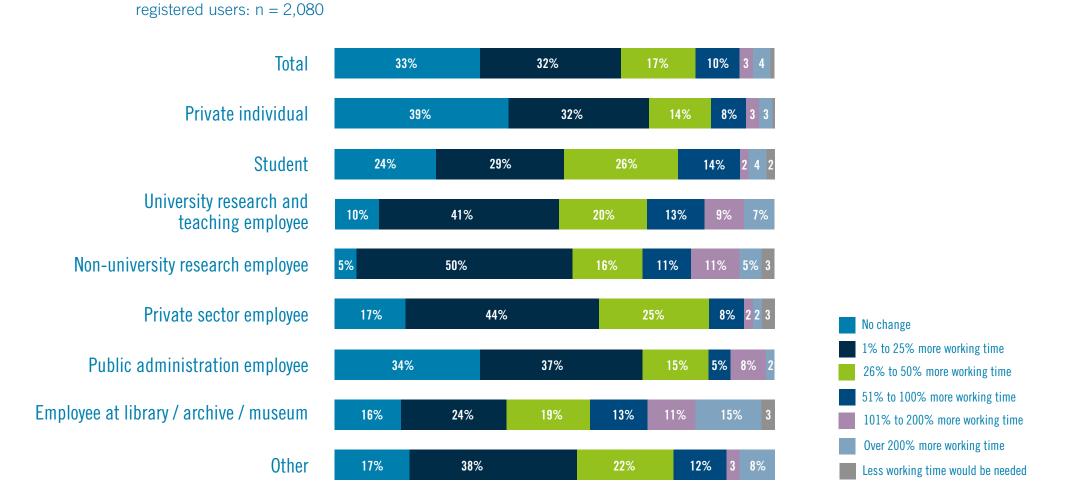
increase in working time if the BnL ceased to exist



of frequent users estimate two additional hours of work per day if the BnL were no longer available

Fig. 15: Additional monthly workload by function if the BnL were no longer available

If you no longer had access to the BnL, how much extra time would you have to spend each month to ensure the supply of equivalent quality information? – Please allow for the fact that you would, for example, have to visit other libraries or use commercial providers (please also consider extra travelling time and distances). In which capacity do you mainly use the BnL?



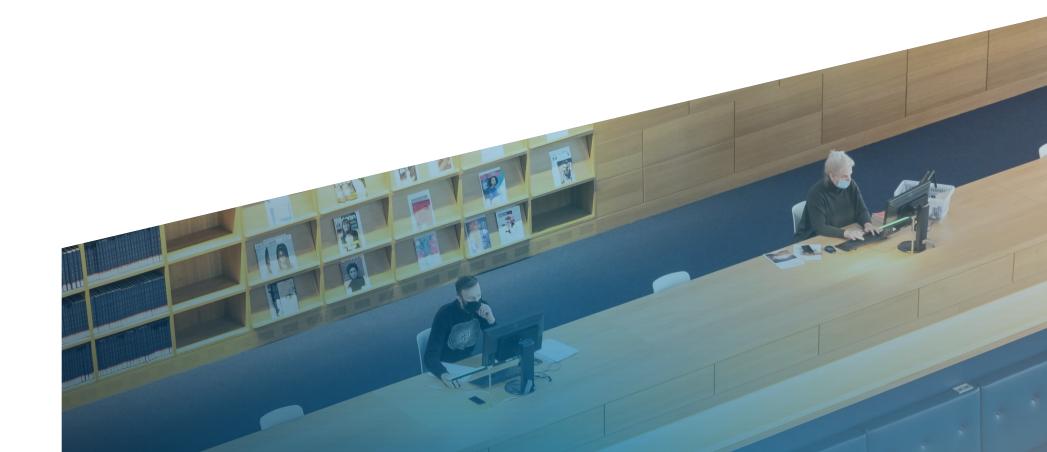
Although only 9% of users visit the library multiple times per week, this group would be most affected by the loss of BnL services: 60% of these frequent users estimate they would face more than two additional hours of work per day. Among those who visit once a week, a significant portion (28%) also expect a daily increase of over two hours. Additionally, 34% of weekly users anticipate an extra workload of up to two hours per day. In summary, frequent users in particular would experience considerable additional burdens if the BnL were no longer available.

4.3 Acceptance of price increases

The questions regarding the level of impact and additional working time were designed to help respondents reflect realistically before estimating monetary values. This approach increases the likelihood of well-considered and honest responses when participants are asked how much they would be willing to pay if the conditions for providing BnL services were to change significantly.

Additional costs If the BnL were no longer able to provide its services in the current form, users might incur extra costs due to relying on other suppliers—such as bookstores, publishers, specialised information providers, or other sources.

- One third of respondents would expect additional costs between 51% and 75%, with this figure rising to 55% among library staff.
- One quarter would anticipate 1% to 25% more in costs, especially among public administration employees, where 39% would expect this level of increase.
- > 16% of surveyed users would estimate an increase in costs of 26% to 50%.
- 13% of staff in non-university research and teaching would expect their costs to more than double, compared to only 5% of the total sample. (This user group is already incurring relatively high expenses—for example, for interlibrary loans or document copies.)
- 4% would expect cost increases of more than 500%, including 6% of university researchers and public administration staff.



"It is a public library, I don't think anyone should directly pay anything for that kind of services."

Fig. 16: Additional costs in the event of a potential closure of the BnL

What extra costs would you incur if you could no longer use these services or the documents and therefore had to rely on other providers?







"Bibliotheken sind eine wichtige Einrichtung für die Gesellschaft. Ich bin es aber gewohnt, dass sie gratis zur Verfügung stehen."

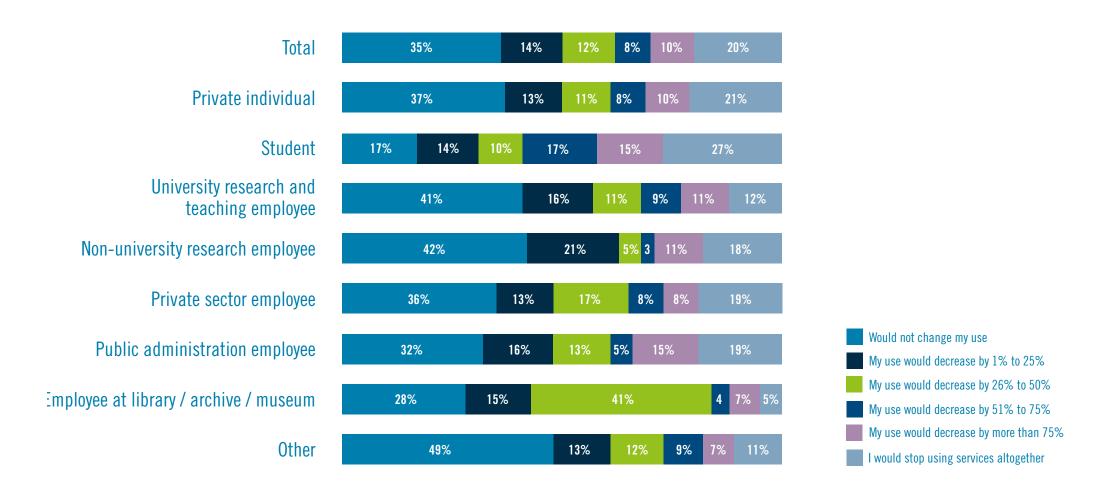
Possible change in usage behaviour Would respondents change their usage habits if services such as registration, borrowing, access to digital documents, or consultations became subject to fees—whether as monthly or weekly charges, borrowing fees, or service fees?

- > 44% of surveyed users stated that their usage would decrease by between 1% and over 75%.
- 35% of users said they would not change their behaviour in response to price increases. This also applies to 42% of non-university and 41% of university researchers.
- > 20% would stop using the BnL altogether, including 27% of students, who tend to be especially price sensitive.
- > 41% of library staff would reduce their usage by at least 25% to 50%, compared to only 12% on average across all users.
- For 10% of respondents, usage would drop by more than 75%, with the figure rising to 15% among public administration employees—an above-average rate.

Fig. 17: Change in user behaviour in response to fees, by function

Please consider the idea that use (joining, loaning, accessing digital documents, etc.) would have to be paid for, e.g. via an annual, monthly or weekly fee, a loan fee or a consultation fee. How likely is this to influence your use of services? / In which capacity do you mainly use the BnL?

registered users: n = 2,080



Does this mean the BnL could introduce or increase fees—beyond existing charges for scanning or interlibrary loans—without causing economic harm? The following responses regarding users' willingness to pay extra will provide further insights.

4.4 Willingness to pay in the event of loss of the BnL

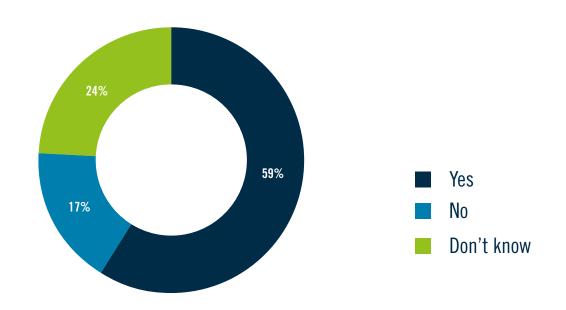
The central question here is whether respondents would be willing to make regular financial contributions to help maintain the BnL if public funding were no longer available. The aim is to assess their willingness to pay, to explore additional scenarios through follow-up questions, understand their reasons for (non-)payment, and gather concrete expenditures in euros where possible. The key findings on users' willingness to pay are as follows:

- > 59% of users would be willing to pay extra voluntarily to ensure the continued operation of the BnL. This willingness is highest among university researchers and educators (74%), whereas it is significantly lower among private-sector employees (52%) and students (42%).
- 17% reject regular co-payments altogether. Among them, 34% of students and 31% of public administration employees are disproportionately represented as unwilling to pay extra.
- > 24% of respondents are undecided.

Fig. 18: Willingness to Pay

The BnL is financed largely by public funds. In the unlikely event that this funding was no longer available, would you be prepared to pay a certain amount to ensure that BnL continued to operate?

registered users: n = 2,080



Follow-up questions for users

In the previous "open-ended direct" question, no specific monetary amounts were mentioned in order to avoid influencing respondents. Willingness to pay is often underestimated and typically reported too low. For this reason, targeted follow-up questions were asked—some directed exclusively at individual users, and others specifically at libraries in the bibnet.lu network. This distinction reflects that both target groups receive different service packages from the BnL. "Der Fortbestand der BnL ist im Interesse der Bevölkerung."

Follow-up question on the introduction of an annual user fee Users were asked four follow-up questions. The first involved a specific suggestion: the introduction of an annual user fee.

- > 24% would be willing to pay an annual fee when asked again, while 45% would still refuse. The willingness to pay is highest among students and public administrations, at 25% each.
- Rejection rates were particularly high among staff in non-university research and teaching (60%) and those in the private sector (52%).
- Among other users—primarily self-employed professionals—47% indicated, upon reflection, that they would be willing to pay a reasonable annual fee. This suggests that consideration of the associated costs plays a key role and can shift opinions.

Although the follow-up question about whether users would in fact pay an annual fee to maintain the BnL may seem simple, many respondents found it difficult to answer. In this study, 31% stated they did not know whether they would be willing to pay such a fee.

4.4 Willingness to pay in the event of loss of the BnL

Follow-up question on why no usage fee would be paid In a follow-up, users who had declined to pay a user fee were asked why they were unwilling to do so. Several important reasons were offered as closed questions:

- > 62% of users believe that the BnL should continue to be publicly funded through taxes. Employees in the private sector (80%) and in public administration (78%) were significantly more opposed to the introduction of fees.
- > 58% stated that BnL services should not be subject to charges. Rejection rates were highest among employees in the private sector (64%) and public administration (61%).
- 18% said that the BnL is not valuable enough to justify payment. Even 22% of public administration employees shared this view.
- 27% of users stated they could not afford any fees, including about half of all students and 44% of university researchers and educators.

Many users argued that free access to education is a fundamental right. They believe the state must guarantee free access to printed and digital collections, as cultural heritage should not be commercialised. In their view, the BnL—like public transport—should remain free of charge. Users said they would only consider paying fees if their use was particularly intensive and not exclusively private in nature.

62%



believe that the BnL should continue to be **publicly funded** through taxes



58%

statet that BnL services should not be subjet to charges





stated they could not afford any fees

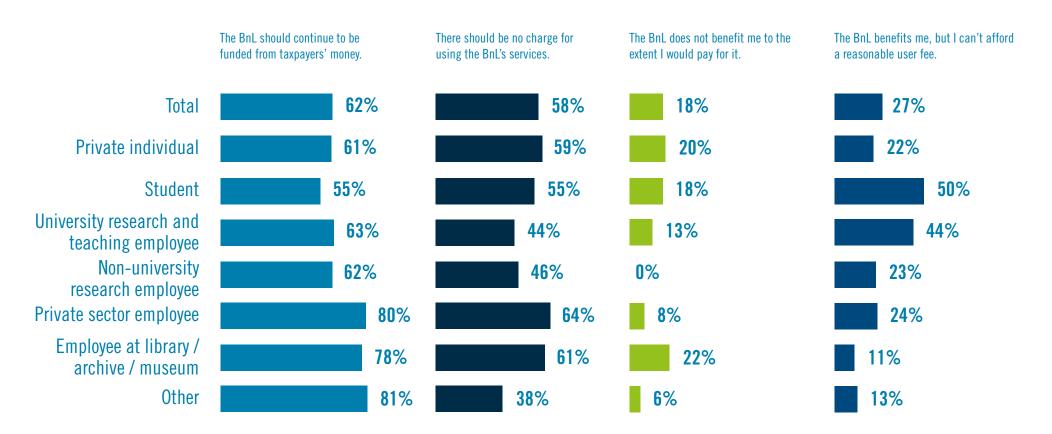
Fig.19: Reasons for rejecting potential user fees, by function

Why did you answer "No" or "Don't know" to the previous question?

Multiple answers possible

In which capacity do you mainly use the BnL?

registered users who responded accordingly to the previous question: n = 634



4.4 Willingness to pay in the event of loss of the BnL

Follow-up question on maximum willingness to pay In a subsequent open-ended direct question, users were asked to state the maximum percentage increase they would be willing to pay to ensure the continued operation of the BnL. This question was based on the individual value in euros each user had indicated previously as their current monthly expenditure for using the BnL: "If you were free to decide how much more as a percentage would you be prepared to pay to ensure the continued existence of the BnL?"

- > 19% of users were not willing to pay any additional amount—even after follow-up.
- > 34% stated they would pay between 1% and 10% more.
- > 18% were willing to pay 81% or more to support the BnL.
- > 16% said they would pay 41% to 80% more.
- > 8% indicated willingness to pay 11% to 20% more.
- > 5% were prepared to pay an additional 21% to 40%.

Users from university (32%) and non-university research and teaching (23%) showed the highest willingness to pay 81% or more—compared to 18% of private individuals. This underlines their dependence on the BnL services in their daily work. Among other users, primarily self-employed professionals, 34% were willing to pay more, showing a clear recognition of the BnL's value for their work—particularly when prompted to reflect on it. The lowest willingness to pay was found among students (24%) and private-sector employees (23%), who most frequently selected the lowest category of 1% to 10% additional payment.

Users were also asked to briefly explain why they would or would not be willing to pay more to use the BnL. Many described the BnL as a socially essential institution, while at the same time insisting that a public service like a national library should remain free of charge. Respondents stressed that access to knowledge should not depend on income. They reveal a basic willingness to pay—especially if fees were socially graduated, income-based, or linked to usage levels.

Strong opposition to additional fees came mainly from pensioners, students, and the unemployed, who argued that financial barriers would exclude low-income groups from access to education and information. "Die Bereitstellung einer Nutzerkarte ist in vielen europäischen Ländern mit einer Nutzungsgebühr verbunden. Dies ist eine vollkommen legitime Maßnahme, um bestimmte finanzielle Grundbedürfnisse einer Bibliothekseinrichtung zu decken und den Nutzern zugleich klar zu machen, dass es sich um eine schätzenswerte Kulturleistung handelt."



"Bleibt kostenlos Kinder!"

Another large group of users expressed high appreciation for the BnL. They clearly acknowledged the academic and professional benefits of the library, particularly the access to specialised literature and the BnL's role in preserving cultural heritage. Many in this group showed a strong willingness to contribute financially, including in higher ranges, to support the BnL.

Follow-up question on adjusting previously stated willingness A final follow-up question was asked: "Now that you have thought about the reasons for your decision, would you like to stick with it, or like to change it?" This produced the following key results:

- 85% of users maintained their original answer and were not willing to increase their contribution.
- > 11% indicated they would now be willing to pay 1% to 10% more.
- > 2% would pay 11% to 20% more.
- Just 1% each would pay more in the remaining higher tiers (21–40%, 41–80%, 81% and above).

This follow-up question was only addressed to the 634 users who initially expressed no willingness to pay but changed their mind during the survey. Among these, university researchers and educators showed the highest rate of revision in the lowest category (1% to 10%), with 17% adjusting their answer. The highest additional willingness to pay in the top tier (81% and above) was observed among private-sector employees, although only 3% of them fell into this category.

Across all four follow-up questions, the survey revealed that some respondents revised their original figures as they reflected more deeply on the value of BnL services and the cost of alternatives.

Follow-up questions for the partner network The BnL provides a wide range of specialised services for the national library network. For this reason, different scenarios were presented to partner libraries than to individual users.

Willingness to assume services Without public funding, the BnL would no longer be able to offer its full range of services to the more than 90 partner libraries in Luxembourg. The partner libraries would then need to decide which services they could take on themselves.

- > 50% would continue cataloguing and maintain the OPAC.
- > 49% would be willing to cover the licence costs for their library software.
- > 35% would purchase and license digital media.
- > 32% would offer consulting services within their own institutions.
- > 25% would fund professional development and training programmes.

Other services that partner libraries would consider assuming include interlibrary loan services or recruiting and absorbing BnL staff into their own institutions.

Estimated costs for taking over BnL services If partner libraries were to assume these responsibilities themselves, the resulting costs would be:

- > €4.9 million for maintaining the online public access catalogue (OPAC)
- > €4.7 million for purchasing and licensing digital media
- > €4.6 million for library software licence fees
- > €2.4 million for providing professional training and development
- > €2.2 million for delivering consulting services

In total, the partner network would face costs of approximately €18.85 million to compensate for the services currently provided by the BnL.

4.5. Possible compensation payments by the state

In the final part of the survey, users and the partner network were presented with a hypothetical scenario in which public funding for the BnL is discontinued, but the Luxembourg government offers monthly compensation payments to former users (Willingness to Accept). The aim was to determine the expected compensation amounts in euros.

Compensation demands from users If the government were to withdraw funding and the National Library ceased operations, users would demand an average monthly compensation of \in 589 from the state. The highest compensation claims came from public administration employees, averaging \in 750 per month, followed by private individuals (\in 690), and students, who demanded \in 511 per month. In all these groups, the requested compensation amounts far exceed users' actual average monthly expenditures, making them unrealistic.

In contrast, the compensation amounts claimed by employees in non-university research and teaching, at \in 117 per month, those in university research and teaching at \in 70, employees in the private sector at \in 19, and other users at \in 137 per month, are much more realistic.



"I really like the library, and I am proud to enter such a facility, particularly as a naturalized Luxembourgish citizen. It fills me with pride knowing this operates at no cost for the student and researcher. The library is one of the best I have seen in its function and atmosphere."

Compensation demands from partner libraries Employees of the partner network were also presented with the hypothetical scenario that public funding for the BnL would cease. They were asked to estimate an appropriate monthly compensation amount that the Luxembourg government should provide to their institution.

The compensation demands of libraries amount to an average of €58,580 per month. This proves that the 90 libraries in Luxembourg's partner network value the services provided by the BnL very highly.

CHAPTER 5 How much is the BnL worth to its users?

5.1. Method for determining the added value

The calculation of the National Library's added value for Luxembourg's knowledge society is based on the answers to the five key valuation questions, the corresponding follow-up questions, and the initial questions about respondent's typology and usage behaviour. The underlying method used is the Contingent Valuation Method (CVM).

This method was developed in the United States in the late 1940s and fundamentally reviewed and advanced in 1993 by Nobel Prize winners Robert Solow and Kenneth Arrow (1). Since then, the CVM has been widely applied in various fields such as cultural policy, public health, tourism, and environmental protection.

A milestone in the evolution and recognition of CVM came with the Exxon Valdez oil spill off the coast of Alaska in 1989, which sparked a major debate on the monetary valuation of environmental damage. In response, the U.S. Congress commissioned the National Oceanic and Atmospheric Administration (NOAA) to establish criteria for damage assessment. The NOAA panel, chaired by Solow and Arrow, concluded: "CV studies can produce estimates reliable enough to be the starting point of a judicial process of damage assessment, including lost passive-use values" (2). As a result, compensation values determined via CVM have since then been accepted in U.S. courts as a basis for legal damage assessment.

CVM has also been applied in the library sector. One of the earliest studies (2004) examined the British Library (3). In the German-speaking world, the authors of this report conducted CVM-based surveys in 2010 for the German National Library of Science and Technology (TIB) (4), and in 2012 for the Swiss Federal Institute of Library of Technology (ETH) in Zurich (5). A direct comparison of results is not possible. The UK study did not yet account for digital collections, while the TIB and ETH studies focused on external, institutional (paying) users.

Four steps to determine the added value

The calculation follows a four-step process: direct calculation, indirect calculation, cross-validation, and final factor aggregation.

- 1 Direct calculation First, a monetary amount is calculated for each respondent based on the four question types: investment in access, price elasticity of demand, willingness to pay, and willingness to accept. This figure is then weighted based on usage intensity and the expected cost of alternatives for each individual. Responses from frequent users are given more weight than those from occasional users. This process results in an initial individual value per user, offering a first estimate of total user willingness to pay.
- 2 Indirect calculation In the next step, Bayesian regression models are used to verify whether the direct calculation method produces plausible results. This includes incorporating additional follow-up questions and indicators of increased willingness to pay extra—factors not included in the initial calculation. These variables reflect, for instance, a user's shift in attitude after reconsidering their decision or gaining a clearer understanding of the cost implications. Bayesian models allow for better representation of individual cost relevance and help align the model more closely with the data collected. This results in a corrected individual value per user.
- **3 Cross-validation** The two individual values from the direct and indirect calculation steps are then cross-validated. If necessary, they are combined to form a revised individual value to ensure that the final figure accurately reflects the user's perceived value of the BnL.
- 4 Final factor aggregation The ratio of this revised individual value to the per capita budget of the library results in a factor per respondent. The overall value factor is derived from aggregating all individual factors. The final figure represents the total added value generated by the National Library for both the knowledge society and the wider public in Luxembourg.



"Ich hoffe von ganzem Herzen, dass die BnL ihr Serviceangebot fortsetzt, da es meiner Meinung nach einzigartig ist."

5.2. Added value of the BnL for the knowledge society

"Eine Schließung von BnL oder das Beenden staatlicher Finanzierung wäre auf gesellschaftlicher und politischer Ebene eine Katastrophe – nicht auf privater finanzieller Basis. Vielen Dank für Ihre Arbeit."

The study confirms that the BnL is indispensable to its users and to the knowledge society in Luxembourg. The National Library generates a return that far exceeds the amount invested in it.

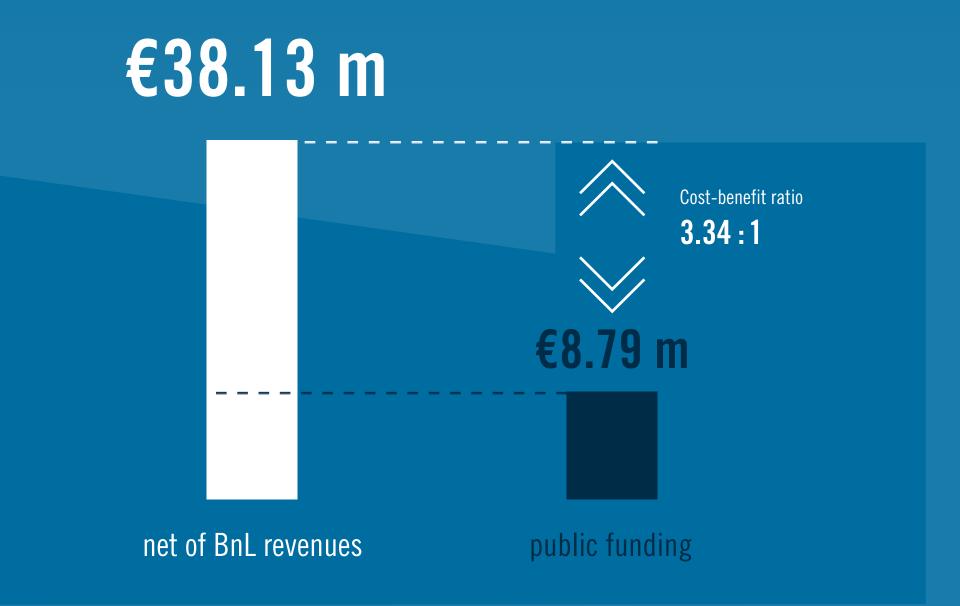
- The BnL generates €38.13 million in value for Luxembourg's knowledge society from €8.79 million in public funding.
- If public funding for the BnL were to stop, Luxembourg's economy and society would be damaged to the tune of at least €29.34 million. Since it can be assumed that users would have to cover the former public funding amount of €8.79 million themselves, the total loss to the knowledge society would amount to €38.13 million.
- For every euro of public funding invested in the BnL, the National Library generates
 €3.34 in added value for Luxembourg's knowledge society.
- BnL users confirm that the library is worth 3.34 times more than the costs it generates.

Added Value

What value does the BnL generate for its users and the knowledge society?

The BnL is worth 3.34 times more than the costs it generates.

For **every euro** of public money invested in the BnL, the library **generates 3.34 euros** added value for Luxembourg's knowledge society. If **public funding** for the BnL were **to stop**, Luxembourg's economy and society would **be damaged** to the tune of at least **29.34 million euros**.



5.2 Added value of the BnL for the knowledge society

Willingness to contribute more by user group

The willingness to contribute additional funding varies by user group. The partner libraries indicated that they would be willing to pay \in 18.85 million to ensure the continued existence of the BnL. This amount would cover 49% of the total potential additional contributions, which amount to \in 38.2 million.

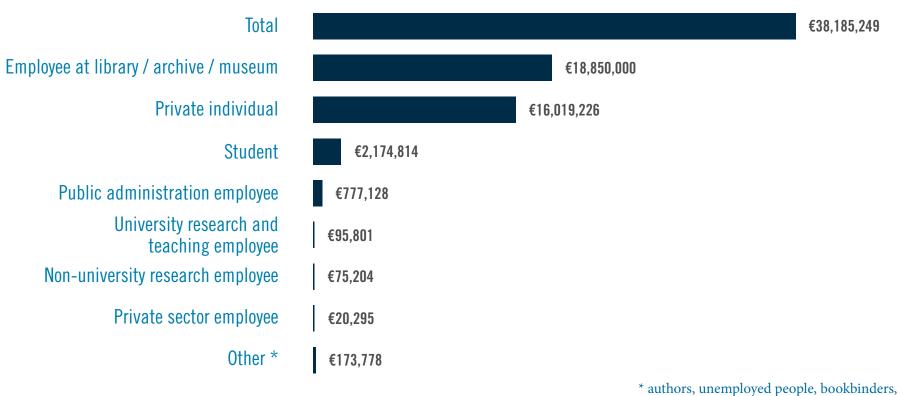
Private individuals are willing to contribute approximately $\in 16$ million, accounting for 42% of the total amount to support the BnL in Luxembourg. Students express their appreciation with a willingness to pay $\in 2.2$ million, representing 6% of the total.

Institutional and private-sector users together account for approximately 3% of the total amount. Users from public administration show a higher willingness to contribute, with a total of \in 777,000. However, it must be noted that these costs would not be covered directly by the users themselves, but rather indirectly through public funds. University-based researchers and educators would contribute \in 96,000, non-university institutions \in 75,000, and the private sector approximately \in 20,000.

Fig. 21: Willingness to contribute more, by user group

Added Value: Annual willingness to pay more by user group

registered users: n= 2,080



authors, unemployed people, bookbinders, journalists, artists, doctors, self-employed people, school teachers, translators



€18.85 m

would be paid by **partner libraries** to **ensure** the **continued existence** of the BnL



Each user is prepared to spend an average of

E28 more per month to ensure the continued existence of the BnL

If public funding were to be terminated, the economy and society would suffer damage totalling at least

€29.34 m



Wie viel ist die BnL ihren Nutzern wert?

CHAPTER 5

"I hope it can remain as support for integration in Luxembourg."

To ensure the continued existence of the BnL, users would be willing to pay an average of \in 28 more per month. It is important to note that current usage costs are very low, as almost all services are offered free of charge. In fact, 72% of respondents currently spend less than \in 20 per month. The willingness to pay extra varies significantly by user group, as the following analysis shows. Users would be willing to pay the following additional monthly amounts:

- > €64 from employees in the private sector,
- > €44 from private individuals,
- > €8 from university researchers and educators,
- > €15 from other users,
- €54 from students,
- \blacktriangleright €13 from staff in non-university research and teaching,
- > and €79 from public administration employees.

CHAPTER 6 Users' wishes for the future

Users' wishes for the future

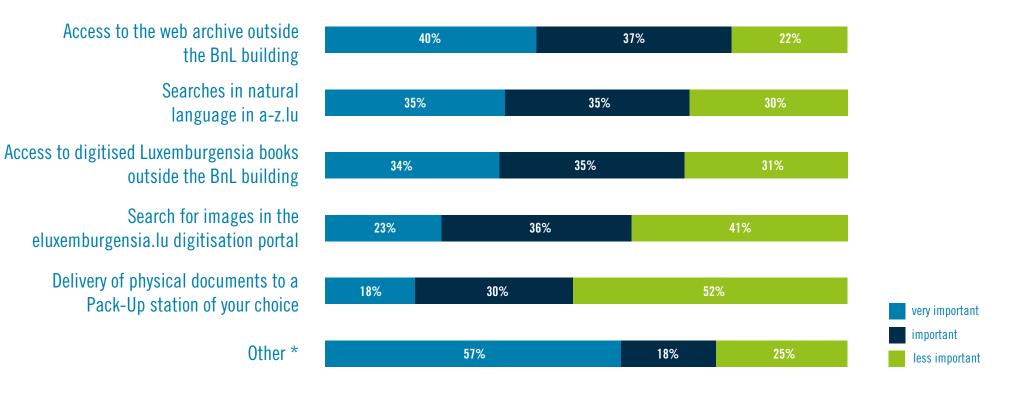
To identify the wishes of users and partner libraries regarding future services and offerings, the survey presented suggestions for new services while also allowing space for open-ended responses.

Individual users' wishes for the future The BnL's web archive mainly collects websites with the domain ".lu". Although the archive is accessible via an online portal, it can currently only be consulted within the library building due to copyright restrictions. As a result, 77% of users consider unrestricted external access in the future to be "important", with 40% even rating it as "very important".

Fig. 22: Future expectations: user perspective

How important do you feel it is for BnL to provide the following future offerings and services?

registered users except library staff: n = 1,964



* develop an app, GBI/Genios, legal databases, longer opening hours, more workstations and group rooms ("carrels"), Libby, free scanners, e-books for iPhone, image archive, interlibrary loan, new acquisitions lists At present, research in the a-z.lu central search engine is carried out via keyword entry. 70% of users wish natural language search input in the future, and 35% even consider this functionality to be "very important".

The eluxemburgensia.lu digitisation portal has been making Luxembourg's printed cultural heritage digitally accessible since 2002. This mass digitisation supports cultural preservation and enables new usage patterns. 69% of users consider future external access to the portal to be "important", with 34% rating it "very important". Additionally, 59% of users find it important to be able to search specifically for images.

"Sonntags öffnen! Danke."

48% of respondents believe it is important that borrowed documents can in the future also be delivered to a Pack-Up station.

"Elargissements des heures d'ouverture." Additional user wishes include: a dedicated library app, expanded access to further economic and legal databases, more work and seating space in the reading room and group study areas, free scanning options, and the expansion of interlibrary loan services.

Since the end of the survey, one request—extended opening hours has already been addressed, with the library now opening on Mondays from 10 a.m. Work is also underway to increase the number

of workstations and lockers. Some users expressed interest in services that the BnL already offers, indicating that not all users are equally aware of the wide range of services available.

"Mehr und bessere Schließfächer."

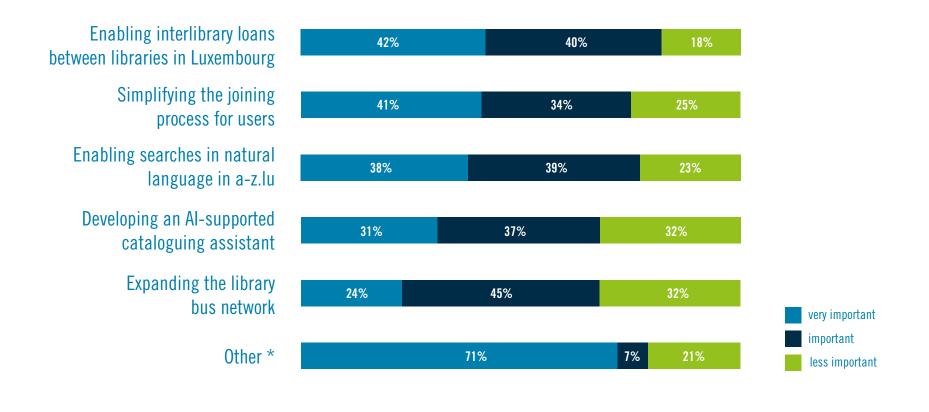
"Eine Anmeldung für Bicherbus & BnL – statt einzeln."

"Zu allen Öffnungszeiten der BnL sollte es immer eine Besetzung an der Rezeption geben."

Fig. 23: Future expectations: partner libraries

How important do you feel it is for BnL to provide the following future offerings and services?

employees at a library / archive / museum: n = 114



* Make a-z.lu more user-friendly, expand the web archive, continue digitisation, offer citizen services, develop an app, extend opening hours, provide a complete catalogue for small libraries

"Bitte mehr Workshops, Ausstellungen, Konferenzen." "Ich betone, dass meiner Meinung nach eine Kinder / Jugendabteilung fehlt. Wenn wir wollen, dass unsere Kinder die BnL weiterhin nutzen, müssen wir sie mitnehmen und für Bücher interessieren, aber auch für den Ort, an dem all dieses Wissen aufbewahrt wird..."

The partner libraries' wishes for the future Targeted questions about future services and offerings were addressed to members of the partner library network.

The network demonstrates a high degree of consensus: 82% consider interlibrary lending within Luxembourg to be "important", with 42% rating it as "very important". 75% of partner libraries consider simplified user registration to be important, with one third rating it as "very important". 77% of network members consider natural language search input in a-z.lu to be "important", and more than one in three rate it as "very important". 68% consider the development of an Al-powered cataloguing assistant to be a priority, with approximately one third of institutions finding this development "very important". 74% see the expansion of the "Bicherbus" mobile library network as significant, with 24% describing it as "very important."

Additional suggestions include making a-z.lu more userfriendly, expanding the web archive, continuing digitisation efforts, offering citizen-oriented services, developing a mobile app for library services, and making the central catalogue usable or transferable for smaller libraries.

The respondents submitted a total of 723 open-ended responses expressing wishes, suggestions, praise, and criticism. The extensive user feedback is particularly noteworthy and rarely encountered in other comparable studies. 27% of the responses included praise for the BnL, with positive comments such as "keep it up," "everything is excellent," or simply "thank you." This feedback has already been reflected in the previous chapters through selected quotes introducing each section. Additional suggestions users would like the BnL to consider for the future are focused on collection development, infrastructure, opening hours, public relations and communication, as well as lending services.

- > Users expressed a wide range of suggestions for future BnL services and offerings. 17% percent of respondents requested the expansion of the collection, especially children's and young adult literature. Many proposed that the BnL should be made more accessible and appealing to children and families, to foster reading habits and engagement with the collection from an early age.
- 10% of responses addressed infrastructure improvements, such as increasing the number of workstations, seating, and group study rooms, as well as better lighting in the reading room.
- > 8% of respondents called for improved PR and communication, with more targeted promotion of the BnL's services. An equally strong wish (also 8%) was expressed for more practical lending services, including interlibrary loan and the Pack-Up stations.
- Additionally, 4% of users requested a mobile app to check real-time seating availability in the reading room, and improvements to the a-z.lu search engine, potentially using artificial intelligence. Simplified registration procedures and a combined user card for the BnL and "Bicherbus" were also suggested.
- Other wishes included maintaining quiet in the reading room, installing a coffee machine in the entrance area, and offering a more affordable cafeteria—a wish the BnL has recently fulfilled by changing its operator.

"Der Service während des Lockdowns, Bücher nach Hause schicken zu lassen, war sehr schön. Deshalb finde ich die Idee der Lieferung an eine Packstation äußerst interessant. Für den Lieferservice würde ich auch etwas extra bezahlen." Users have clearly expressed their expectations and ideas for the future of the BnL.

THE QUESTION NOW IS: WHAT STEPS SHOULD BE TAKEN NEXT?



"Everything you need for better future and success has already been written. And guess what? All you have to do is go to the library."

Henri Fréderic Amiel

LIST OF FIGURES

Fig. 01:	Respondent characteristics: use by function	page 17
Fig. 02:	Respondent characteristics: distribution by age and function	page 18
Fig. 03:	Usage intensity: distribution by time and function	page 21
Fig. 04:	Follow-up question: user interests by subject area	page 23
Fig. 05:	Follow-up question: main reasons for visiting the library in person	page 24
Fig. 06:	Follow-up question: user loyalty by on-site services	page 26
Fig. 07:	Follow-up question: online use of BnL services	page 29
Fig. 08:	Follow-up question: user loyalty in online use of services	page 31
Fig. 09:	The special advantages of the BnL	page 33
Fig. 10:	Overall user satisfaction according to Net Promoter Score	page 35
Fig. 11:	The importance of the BnL: user perspective in comparison	page 39
Fig. 12:	The importance of the BnL: partner libraries in comparison	page 41
Fig. 13:	Time required per day when using the BnL, by function	page 45
Fig. 14:	Monthly expenses for using the BnL, by function	page 46
Fig. 15:	Additional monthly workload by function if the BnL were no longer available	page 49
Fig. 16:	Additional costs in the event of a potential closure of the BnL	page 51
Fig. 17:	Change in user behaviour in response to fees, by function	page 53
Fig. 18:	Willingness to Pay	page 54
Fig. 19:	Reasons for rejecting potential user fees, by function	page 57
Fig. 20:	The added value of the BnL for the knowledge society	page 69
Fig. 21:	Willingness to contribute more, by user	page 70
Fig. 22:	Future expectations: user perspective	page 73
Fig. 23:	Future expectations: partner libraries	page 75

Note

Due to the rounding of decimal places, some figures in the charts may not add up to exactly 100%, but instead total 99% or 101%. This is not an error, but a result of the consistent rounding method used.

APPENDIX

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Note

All personal designations used in this study apply equally to women, men, and non-binary individuals. Gendered language has been intentionally avoided in favour of better readability. Furthermore, no data related to gender identity was collected in the course of this study.



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