KB nationale bibliotheek

# Market consultation

| Colophon | |
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| Prepared by: | KB National Library of the Netherlands |
| Date: | July 30, 2025 |

KB nationale bibliotheek

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# 2 Introduction

## 2.1 Introduction

Before you lies the process document regarding the implementation of the market consultation on "hazardous substances in KB collections." This document explains why the KB initiated a market consultation, outlines the needs, and explains the questions the KB would like to receive answers from the market. The KB intends to use the information obtained during this market consultation to further prepare the (potential) upcoming European tender for "hazardous substances in KB collections." This is essentially a written (public) market consultation. The KB reserves the right to schedule a clarifying meeting with parties that have submitted a response.

## 2.2 Purpose of market consultation

The main objective of the market consultation is to align a potential tendering process with the KB's vision and ambition within the available market possibilities.

With this market consultation, the KB aims to gain insight into the following topics:

- To inventory which market parties within the EU have experience with the above topic.
- Determine which analytical technique(s) are suitable for use in identifying hazardous substances within the KB collection. This concerns the heavy metals arsenic, mercury, lead, and chromium used in dyes and paints.
- Gain insight into whether the entire workflow can be outsourced to one party, or whether the project should be split into smaller sub-packages.
- To determine how many collection items can be analyzed using the proposed technology in the available time prior to the upcoming major collection move to the new collection storage facility.
- Gain insight into the working method/process on location in the current storage compartments.
- Gain insight into whether these analysis techniques/screening could impact the accessibility of the storage compartments and the collection, potentially disrupting service provision. For example, because the space is inaccessible during analyses?

## 2.3 Publicity of market consultation

This market consultation has been published via TenderNed and is not part of the tender procedure. The market consultation is entirely voluntary for all parties. The results arising from the consultation are public, with the exception of commercially sensitive data, which will be treated confidentially. The KB will prepare an anonymized report for this purpose, summarizing the main findings of the market consultation. This report will be included in the tender documents.

# 3 About the KB National Library of the Netherlands

## 3.1 The KB

The mission of the KB National Library of the Netherlands (KB) is to preserve and make available Dutch cultural heritage in print, written, and increasingly digital formats. Since August 31, 1993,

the KB has been an independent administrative body, funded by the Ministry of Education, Culture and Science. The Public Library Services System Act ( Wsob ) came into effect on January 1, 2015, giving the KB a governing role within the network of public libraries and responsibility for carrying out system tasks. The new law also makes the KB responsible for developing the national digital library.

The KB connects people and words, contributing to a smarter, more skilled, and more creative Netherlands, now and in the future. The KB Policy Plan 2023-2026 sets out the following strategic goals for the coming years:

1. **Reading and digital literacy** : empowering more people to read and participate in the information society.
2. **Research and discovery** : strengthening the connection between research and society.
3. **Sustainable access** : caring for the collection in our national library.

The KB is responsible for over 122 kilometers of physical library materials, dating from the early Middle Ages to modern-day publications. This heritage collection is stored in multiple indoor storage compartments spread across 10 floors. The collection is displayed in open, static bookcases with narrow aisles (approx. 80 cm).

The KB offers the opportunity for a viewing to get an impression of the location and the collection to be screened.

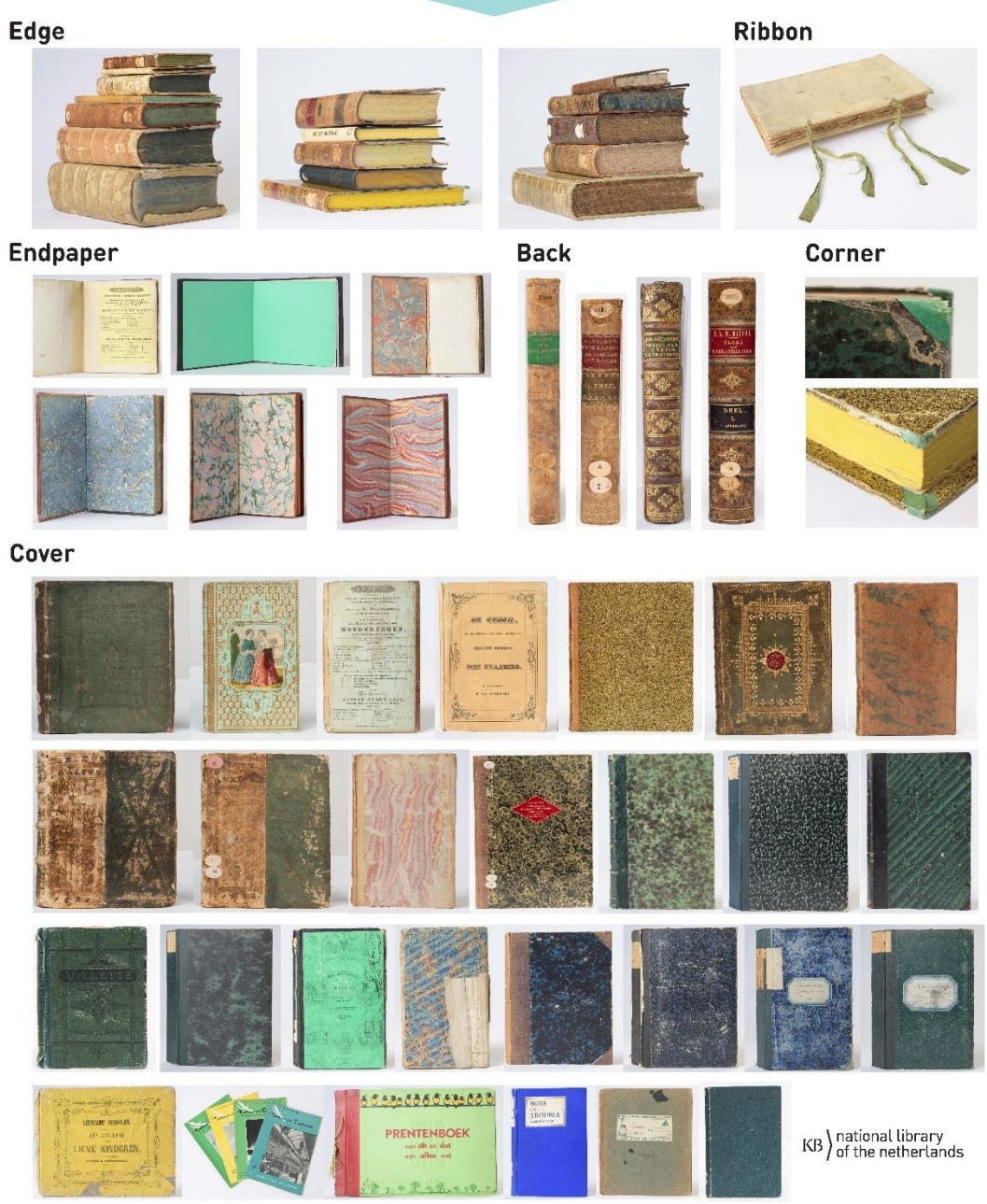
The KB is currently developing a new external collection storage facility, to which the entire collection will be moved between mid-2027 and mid-2029.

## 3.2 Current situation

The KB collections contain hazardous substances. Heavy metals such as arsenic, mercury, lead, and chromium have been used in dyes and paints applied to enhance books. These substances can be found in various places on an object, such as the book cover, spine, corners, edges , endpapers, or ribbons (reading and closing ribbons).

KB nationale bibliotheek

# Arsenic, you can't judge a book by its cover



Currently, the KB can only test for arsenic using a time-consuming indicator test in the conservation laboratory. Other mobile analysis techniques, such as X-ray fluorescence (XRF) and Raman spectroscopy (RAMAN), could be used on-site in the warehouses to more quickly detect not only arsenic but also other hazardous heavy metals such as lead, mercury, and chromium.

The Dutch Working Conditions Act (ARBO) specifies how an employer should handle these hazardous substances if employees are exposed to them. These substances are classified as CMR substances (carcinogenic, mutagenic, and/or reprotoxic substances). As part of the risk inventory and evaluation (RI&E), an employer must also assess exposure to hazardous substances. This means, since we do not have the option to dispose of hazardous substances in our collections, that the KB It is mandatory to avoid contact with these substances. The KB adheres to the ALARA principle, in which exposure is 'as low as reasonably " possible ". Wearing personal protective equipment is the last permitted measure. We are therefore asked to implement measures that largely enable safe handling of contaminated collections without requiring employees to protect themselves.

To do this, the KB needs to know which items in the collection contain hazardous substances. This requires screening parts of the collection for these hazardous substances. Taking samples for analysis is not an option – the technique used must be in situ and non-destructive.

The scope of the screening project is as follows:

- hazardous substances used in dyes and paints: arsenic, lead, chromium and mercury (heavy metals used to make colors)
- the collection to be tested:
    - The current assumption is that at least half a million signatures need to be checked for heavy metals. Note: a single signature can consist of multiple items. This equates to approximately 650,000 bindings. Based on the analysis results, this number could be adjusted upwards or downwards through pattern recognition and additional research.
    - Hazardous substances can be found in various places on an object. They can be found on the book cover, spine, corners, edges, endpapers, or ribbons (bookmarks and closure ribbons).

### 3.3 Desired situation

To comply with occupational health and safety legislation, the proposed approach is to 1) identify contaminated collections at the item level, 2) visibly mark these items (mark the object and include a report in the catalog), and 3) limit exposure to these substances by isolating them (i.e., applying suitable packaging). This allows contaminated items to be handled in work processes without protective equipment until the item needs to be removed from its packaging.

This market consultation focuses on the first step – identifying hazardous substances at the object/item level in the collection as part of a large-scale screening project. Due to the upcoming

relocation of the entire collection to the new external storage facility, this screening is time-sensitive. The entire collection will be relocated between mid-2027 and mid-2029. In preparing the collection for the relocation, any items that tested positive should be isolated prior to the move. This results in an available timeframe for the screening from now until early 2029.

### 3.4 Planning

| Activity | Planning |
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| Publication Market Consultation | July 30, 2025 |
| **Register for inspection** | August 6, 2025 before 12:00 noon |
| Morning/afternoon inspection | August 7, 2025 and August 14, 2025. |
| Deadline for submitting clarifying questions regarding the market consultation | August 21, 2025 |
| Deadline for the KB to answer questions | August 27, 2025 |
| **Deadline for submitting answers to market consultation questions** | **September 8, 2025, 10:00 AM** |
| *Clarifying conversations (optional)* | September 15, 2025 |

Market participants cannot derive any rights from the above schedule. The KB reserves the right to change the schedule or discontinue the market consultation.

### 3.5 Procedure

The procedure is as follows:

1. After publication on TenderNed, interested market parties can download this document and the questionnaire (Word file) from TenderNed.
2. The KB is organizing a viewing on August 7 and 14, 2025, and is offering interested market parties the opportunity to view the spaces and the collection.
3. Market participants who have downloaded the market consultation document can submit written questions about the market consultation document and the procedure until the date specified in the schedule. Questions can be submitted via the Messages module on TenderNed.
4. The anonymized questions and answers will be published on TenderNed on the date included in the schedule.
5. You must submit your response to the questions included in the market consultation document by the date and time scheduled for submission via the Messages Module on TenderNed.
6. Based on the responses from the market participants, the KB may invite them for an in-depth discussion. These discussions will be one-on-one.
7. The responses to and overall results of the market consultation will be recorded in an anonymised market consultation report.

### 3.6 View

On August 7, 2025, from 10:00 AM to 11:30 AM, and on August 14, 2025, from 1:00 PM to 2:30 PM, interested market parties will have the opportunity to view the collection in question to get an idea of the work to be carried out, the possibilities and impossibilities.

The location of the exhibition is the KB National Library of the Netherlands, Prins Willem-Alexanderhof 5, 2595 BE The Hague.

A maximum of two people from an interested market participant may be present during the viewing. Registration for the viewing must be completed by 12:00 PM on August 6, 2025. Interested market participants can choose to view the spaces and the collection on either August 7 or August 14, 2025. Registration for the viewing can be done via the Messages module in TenderNed.

### 3.7 Written questions

Interested market participants are requested not to use company names, product names, or other names related to their organization in their questions. The KB publishes the questions without mentioning the name of the person asking the question and reserves the right to modify questions for this purpose. The KB cannot guarantee anonymity, for example, because the identity of the person asking the question can be deduced from necessary technical questions.

If an interested market party has questions or comments that are (commercially) confidential in nature, these questions can be answered outside the Information Memorandum.

### 3.8 Submit answers

Interested market parties are asked to submit the completed market consultation questions via the Messages module in TenderNed, in Word format.

## 4 Terms and other provisions

The following terms and conditions apply to the market consultation and this market consultation document:

- The KB is currently in its exploratory phase. The KB will use insights gained from the market consultation (where relevant) in preparing a tender and the tender documents. Therefore, no rights can be derived from the starting points and considerations presented in this market consultation document.

- If information must be classified as confidential, this must be clearly indicated by the relevant market participant. The KB will not provide confidential information in the tender.
- Any costs for participating in the market consultation shall be borne by the market party(ies).

**Finally, the KB would like to thank you in advance for your input, perspectives, and dedication. Your input contributes to enriching our insights and thus to shaping the tender.**

## 5 Market consultation questions

| No. | Ask | Answer |
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| **1 Questions about the analytical technique(s)** | | |
| 1a | Which analytical technique(s) can you use to identify arsenic, mercury, lead and chromium within the KB collection, which can be performed on location in the storage compartments? | |
| 1b | How can the technology be used to measure those areas of an object that could lead to exposure when handled? | |
| 1c | Is the measurement quantitative, qualitative, or both? | |
| 1d | In what data form are results produced? | |
| 1st | Can this technique also be applied to measuring cadmium or organic pesticides (such as DDT)? | |
| 1f | What laws and regulations (e.g., radiation exposure) must be considered for the safe application of the proposed technology(s)? And will your company ensure compliance with these regulations? | |
| **2 Questions about the work process and feasibility** | | |
| 2a | How many collection items can be analyzed using the proposed technology(s) within the time available for the major collection move to the new book repository (screening completed in early 2029)? Based on current | |

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| | insights, the KB estimates that the collection to be screened could be approximately 650,000 volumes. | |
| 2b | Can you apply the intended method in a scalable manner in both equipment and staffing? | |
| 2c | Can you explain the intended work process, where the screening is carried out on location in the storage compartments? | |
| 2d | Do you expect KB employees to be involved in the work process, for example in handling the objects? | |
| 2nd | Will the proposed technology(s) impact the accessibility of the compartments where the screening is performed? Consider any restrictions due to radiation risks that might prevent KB staff from entering the space and accessing the collection. | |
| **3 References** | | |
| 3a | Do you have experience with large-scale detection of the heavy metals arsenic, mercury, lead, and chromium, used in dyes and paints in cultural heritage objects?<br><br>If not, are there similar projects in other sectors that could be relevant? | |
| 3b | If 'yes' to question 3a: in which period did you carry out this project? | |
| 3c | What were the costs involved? | |

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| 4 | What information do you need from the KB that is not included in this market consultation? | |
| 5 | What tips or considerations would you like to share with us That you not include in the questions raised? | |