Tender Details

Qualifications

The bid should include your company's track record dealing with similar projects and the individual qualifications of the people who will work on the project. In particular, the qualifications sought include:

- Proven track record developing search solutions for heterogeneous data sets using entity recognition and linked data models.
- Employee(s) with degree-level IT knowledge and skills relevant to the development of work packages detailed below.
- A project team that consists of employees with junior [0-33%], medium-level, and senior [66-100%] levels of experience and skills relevant to the development of work packages detailed below.
- Experience working with data relating to cultural heritage, provenance research, and/or art history.
- Adherence to modern software development standards such as iterative development cycles including development sprints and goal-oriented project management methods.
- Close familiarity with the technologies mentioned and required to fulfill the work packages.

Technical Requirements

- WP 2.1: Method Development
    - Analysis of aimed functionalities and user needs
    - Assessment of technologies already used by JDCRP.
    - Outline of technical feasibility and technical implementation plan for the platform as anticipated in work packages 2.1-2.5.

We envision that the service is required to fulfill the following work packages:

- WP2.2 Data Ingestion
    - The application must be able to ingest sets of (meta)data in multiple formats such as JSON, XML, JSON-LD, CSV, XLS, DublinCore, EDM, and other common formats.
    - The application must support automatic harvesting from an endpoint (OAI-PMH, REST, or similar).
    - Similar to an application such as OpenRefine, the ingestion process might be supported by creating a mapping to an internal data format.
- WP2.3 Data Linking and Matching
    - Users (select team members from the JDCRP) must be able to create interconnections among the datasets by matching the data in the fields. The matching must support exact matches, but also by inexact matches, using Levenshtein distance, confidence intervals, and regular expressions.
    - Apart from the interconnections between provided datasets, the data fields must also be linkable with thesauri and vocabularies such as LinkedArt or WikiData.
- WP2.4 Defining Search Methods
    - Users must be able to define search methods, which are reflected on the front end. Examples of search methods are:
        - Show all items that were looted in 1941.
        - Show all artists with a name similar to 'Harburger'

- Return a complete list of those artists who are primarily painters.
- Find items by keyword 'Marble.'
- Find artists who were born in France.
- Find artist X who is in dataset A and dataset B by name.
- WP2.5 Data Endpoint
  - A front-end must be able to access the defined search methods via a REST endpoint.
  - The search methods must be accessible via an endpoint in a granular way.
  - Requests to the service must support authentication via an OAUTH2.0/OpenID Connect token or similar.
  - Search methods must be cached to improve system robustness and stability whenever there are a high number of users querying the system via the front end.

Hosting and Maintenance

The service provider must provide hosting for the web applications and services it develops within the project's scope. The applications must be accessible as:

(1) A graphic web application for authenticated and authorized JDCRP team members to the above-described operations related to the definition of search methods.
(2) A data endpoint accessed by the front end provides results of the defined search methods. The endpoint should support an authentication method (e.g., by including a token in the REST request).

Throughout the course of the project, we expect regular maintenance to take place on the web applications and services that are in use for the project. We expect server and application maintenance to take place continuously, so it is not explicitly mentioned in the timeline.

- Applying security patches and updates to packages that are used.
- Setting up server configurations and backups.
- Reviewing and retrieving log information and providing it to the front-end service provider.
- Finding, debugging, and removing issues.
- Deploying and (re)starting new versions of web services.

Timeline

Throughout the project, we expect that time for testing and iterative improvement is allocated. Furthermore, writing documentation and reporting on the progress will be required throughout the duration of the services provided. During the complete course of the project, the technical implementation will be developed and installed in iterative development cycles. Each cycle starts with JDCRP and the service provider agreeing on the concrete steps to be taken and outcomes to be achieved and will end with the review of the results and a formal acceptance procedure. JDCRP staff should be trained to apply the technology to various data sets in relation to each development cycle.

The following timeline represents the current expectation of the project development. This timeline may be subject to changes according to the progress achieved.

Q4 2023:

- Understand the applications already developed.
- Understand the aimed functionalities of the end product and the intended target group.
- Become familiar with the data sets to be integrated.
- Analyze technical feasibility.
- Outline a technical vision for the platform development.
- Decide on the target structure and technical setup.

- Create a mapping for the ingested datasets.
- Enrich data, link ontologies and/or vocabularies.
- Create interconnections between datasets.
- Coordinate with the front-end vendor(s) to support their use of the APIs.
- Interim report on the progress until end-2023.

Q1 and Q2 2024:

- Design, develop, and implement the pilot project.
- Define, ingest, and link Documentation of Persecuted Jewish Artists.
- Define, ingest, and link Documentation of Persecuted Jewish Collectors.
- Define, ingest, and link the Educational Module
- Define search methods.
- Define and set up APIs.
- Set up and execute user tests and integrate user feedback.
- Coordinate with the front-end vendor to support initial integration.
- Report on the progress until mid-2024 for an interim report

Q3 2024:

- Finalize tasks including:
    - Data platform
    - Research section
        - Persecuted Jewish Artists
        - Persecuted Jewish Collectors
    - Educational Module
    - Linkage of the different platform sections to the main platform
- Coordinate with the front-end vendor to support full integration
- Scale-up to support platform publication
- Verify system robustness testing and failsafe methods

October 2024:

- Carry out final testing and bug fixing
- Deliver final technical report

Document Format

- Please send your bid including all information requested in one PDF file.
- Supporting documents may be added in a second PDF file.
- The total size of the documents should not exceed 10 MB.

Decision Making

The decision will be made upon the criteria detailed in the document "JDCRP Public Tender Decision Matrix WP2."

Appendix A: Data Examples

Figure 1 and 2: example of the front (recto) and back (verso) of a property card; source: Bundesarchiv Koblenz, Inventar des Collecting Points Wiesbaden, Property Cards, geordnet nach WIE-Nummern (1945-1959), B 323/593, p. 3-4.

The resulting transcription structured in JSON format may look as shown below. Please note the formatting is not final and might change during the course of the project.

```
"property-card": {
    "card-front": {
        "wccp-number": "WIE 3165/4",
        "wccp-number-suffix": "58",
        "classification": "Painting",
        "author": "F. Harburger",
        "subject": "Flower Stillife",
        "measurements": "54 by 45 cm",
        "material": "oil on canvas",
                    "description": "Stillife with Peonies in a large gray vase. \n Unframed.",
                    "presumed-owner": "Transferred into the custody of JRSO, Nuernberg",
                    "inventory-number": "",
                    "catalog-number": "",
                    "claim-number": "",
                    "photo": true,
                    "identifying-marks": "",
                    "other-photos": "",
                    "negative-number": "",
                    "movements": "In-ship 31 \n Out-ship 320",
                    "bibliography": "",
                    "arrival-condition": "fair - undamaged",
                    "depot-possessor": "I.E.J. Frankfurt",
                    "depot-number": "",
                    "weight": "",
        }
        "card-back": {
                    "history-and-ownership": "Confiscated by the \"Institut der NSDAP für Erforschung
der Judenfrage\". \n Deposited atHungen. \n Received at CCP from the Offenbach Archival Depot.",
                    "condition-and-repair-record": "JRSO, Nürnberg",
                    "location": "",
                    "copies-of-card": 3,
                    "forwarded": "29. Nov. 46",
                    "arrival-date": "21 Febr. 46.",
                    "exit-date": "4. Juli 1951",
                    "notes": "",
        }
        "card-other": {
                    "card-color": "Yellow",
                    "SIGNATUR": "B 323/591",
                    "BAND": 6,
                    "TITEL": "WIE 2004 - 4650",
                    "VON_JAHR": 1945,
                    "BIS_JAHR": 1959,
        }

        "card-external-image": {
                    "link": "https://JHN.org/JDCRP/SCANS_FROM_NARA/film144/NARA-260-WLA-
film144-5-wie3165.tif"
        }
}
```

Data coming from other sources may follow a completely different format. The following data is an excerpt describing an [entry from the ERR Jeu de Paume database](.).

Owner: Francis Harburger — Paris, France
Collection: (FHarburger) Paris
Inventory No.:
Artist: Francis Harburger
Medium: Paintings
Title: Pivoines rosées dans un seau de fer sur fond gris [Still life with peonies in a large grey vase]
Description: huile sur toile
54 x 46 cm
Literature:
Provenance and Comments: The artist Francis Harburger deposited for safety this painting in the vaults of the Alliance Israélite Universelle in Paris in March 1940. A unit of the ERR plundered it together with the rest of the content of the AIU in July 1940.
Archival Sources: RA 613, MAEE, Paris, France
Measurements: 54 x 46 cm
Intake place: Alliance Israelite Universelle, 45, rue La Bruyere, Paris
Intake date: 1940-03-00
Transfer place: ERR
Transfer date: 1940-07-00
Transfer place: Institute for the Study of the Jewish Question, Frankfurt-am-Main
Transfer date: 1940-08-20
Transfer place: c/o Magdalena Grape, Debus Kellar, 37, Kaiserstrasse, Hungen
Transfer date: 1943-05-00
Transfer place: Wiesbaden CCP 3165/4
Transfer date: 1946-02-21
Transfer place: JRSO/Nurnberg
Transfer date: 1951-07-04
Images: (No image)