

Amsterdam Time Machine: Pilot Jewish History of Amsterdam

Janna Aerts (University of Amsterdam), Boudewijn Koopmans (University of Amsterdam), Leon van Wissen (University of Amsterdam)

It is the dream of anyone passionate about the past: to travel through time and experience a place the same way people did decades or centuries ago. The Amsterdam Time Machine (ATM)¹ is an open research infrastructure on the history of Amsterdam. This ‘Google Earth of the past’ will allow users to virtually explore the city’s 750 years of history and navigate through the city on the level of neighbourhoods, streets and houses. The project is part of the European Time Machine², which connects almost six hundred different organisations from forty different countries. Since 2017, the ATM, led by the University of Amsterdam, has been working to materialize this ambition, together with a growing consortium of partners from the fields of research, cultural heritage, government and creative industries. It’s main goal is to systematically collect all available data on historical Amsterdam from heterogeneous sources and link them to maps and 3D models. Furthermore, the resulting applications can help to address present-day urban challenges: ‘understanding the past to help shape the future’.

Research Component

The ATM aims to act as an entry point to a wealth of data sets, currently stored in various heritage and research institutions, which can be mapped and visualized together, based on queries run by users. The possibility of querying heterogeneous data sets to obtain spatial representations that integrate such data is of particular interest for researchers, who may for instance use layered maps to combine information on different aspects (socio-economic, demographic, cultural, infrastructural, etc.) of Amsterdam in the past, and rely on the resulting visualizations to find new angles of enquiry on historical phenomena. In this sense, the ATM platform can act as a heuristic tool for researchers to sharpen their research questions or formulate new ones entirely.

Pilot Jewish Amsterdam

The ATM is collaborating with the Jewish Museum and the Amsterdam City Archives on a pilot project about the Jewish history of Amsterdam, in order to make the five centuries of Jewish presence in Amsterdam more visible. The goal of the pilot (running from the end of 2022 until Summer 2023) is to connect datasets from different archives and heritage collections about Jewish Amsterdam by focusing on two streets: the Jodenbreestraat and the Nieuwe Amstelstraat. This will enable researchers to tell the stories of the people living in this quarter;

¹ Amsterdam Time Machine, <https://www.amsterdamtimemachine.nl/>.

² Time Machine Europe, <https://www.timemachine.eu/>.

for example by focusing on migration patterns, social mobility, street life, appreciation/depreciation of the neighbourhood, etc.

In our presentation we will reflect on the experiences we had and the pitfalls we encountered while combining datasets from various archives. Additionally, we would like to demonstrate the potential of (linked) open data techniques and use this opportunity to ask for feedback from other initiatives within the field of digital humanities.

Objectives

The pilot will combine datasets from different organisations and make them more accessible, allowing users to unlock data that has been overlooked so far and discover untold stories about the city. While doing so, the following objectives are kept in mind:

1. We will combine multiple datasets via Linked Open Data (LOD)³ standards in an event-based approach, with the aim of telling more and richer stories about Jewish life in Amsterdam;
2. By producing this prototype, we wish to demonstrate the value of the FAIR data principles and other linked data standards;⁴
3. We want to use the pilot as an opportunity to examine how this type of application could be expanded to a larger part of Amsterdam. The pilot also serves as a kind of 'testing ground', where different organisations can see how their data looks like on the map and how it can be connected.
4. It is our goal to develop a public website for the citizens of the Jewish Quarter, which will ultimately be extended to the people of Amsterdam and visiting tourists. The Amsterdam Time Machine will be in charge of hosting both the site and the database with the metadata.

The following datasets will be connected:

- The Jewish Museum⁵ database: approximately 2.100 people and collection items, mainly from the 17th century;
- The Amsterdam City Archives⁶: market permits (Marktkaarten), civil registries (Bevolkingsregister) and the Image Bank;

³ Berners-Lee, T. (2009). Linked Data, <https://www.w3.org/DesignIssues/LinkedData.html>.

⁴ Nationale Strategie Digitaal Erfgoed, <https://netwerkdigitaal erfgoed.nl/activiteiten/nationale-strategie-digitaal-erfgoed/>.

⁵ Joods Cultureel Kwartier, <https://jck.nl/nl/locatie/joods-historisch-museum>.

⁶ Stadsarchief Amsterdam, <https://www.amsterdam.nl/stadsarchief/>.

- Amsterdam Time Machine infrastructure: geo-infrastructure Adamlink⁷, Address Book 1907⁸;
- NIOD Institute for War, Holocaust and Genocide Studies / NOB Netwerk Oorlogsbronnen: estate inventories in the Einsatzstab Reichsleiter Rosenberg archive (ERR)⁹
- International Institute of Social History: the archive of the Diamond Workers Union (Diamantwerkersbond)¹⁰

What's next?

We have already created a first version of the website *Straatlevens*¹¹, where we managed to connect two datasets to the Adamlink street repository. On this website, the entries of the Diamond Workers Union and the Address Book 1907 have been connected to the addresses of the people living and/or working there. Users can select two streets and navigate between the data sources. All addresses are represented by an URI from the Adamlink repository.

The main future challenges are:

1. Dimension of time:
The datasets contain records from different time periods. It is not always clear which period a specific record belongs to, so we will need a way to navigate between different time periods while at the same time dealing with this ambiguity.
2. Disambiguation of people in different datasets:
We need to find out if John Doe in dataset 1 is the same John Doe as in dataset 2 and 3. This will probably require human curation but might also be done (partly) by AI.
3. Reflecting on how to visualize the data:
Currently, we offer the users an entry through a map, showing the addresses we have data on. We would also like to implement a timescale or time filter. Ultimately, we wish to offer an historical 3D entrance to the data. In order to do so, we will explore the possibility of an Augmented Reality (AR) application that acts as a virtual layer.
4. Extending the geographical coverage:

⁷ Adamlink, <https://adamlink.nl/>.

⁸ Adresboek 1907, <https://addressbooks.amsterdamtimemachine.nl/>.

⁹ De papieren getuigen van roof en ontrecting. Een nadere toegang op het archief Einsatzstab Reichsleiter Rosenberg. NIOD, <https://www.niod.nl/nl/projecten/de-papieren-getuigen-van-roof-en-ontrecting>.

¹⁰ Archief Diamantbewerdersbond. International Institute of Social History, <https://iisg.amsterdam.nl/onderzoek/projecten/andb>.

¹¹ *Straatlevens*. Een Amsterdam Time Machine, <https://streetlife.amsterdamtimemachine.nl/>.

We aim to add more streets to the reconstruction of the Jewish neighbourhood; especially the former area of Vlooienburg, which has been demolished and replaced by the current City Hall and National Opera area.

5. Creation of the technical infrastructure:

The data will have to be accessible to both developers and domain experts through the technical infrastructure. Via our knowledge graph developers we will be able to access various data sources according to known protocols and techniques such as HTTP(S), REST API, GraphQL, text search and SPARQL. We will grant disclosure to domain experts according to shared ontologies such as CIDOC-CRM / Linked Art, RDA.

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