

# Wikidata at the museum

lowering thresholds for research with linked data  
in Sweden

Alicia Fagervig  
Wikimedia Sverige  
[alicia.fagervig@wikimedia.se](mailto:alicia.fagervig@wikimedia.se)



Linked data and international  
standards for cultural heritage  
2022-09-14

# Background

**Wikimedia Sverige** is the Swedish chapter of the Wikimedia Foundation – empowering organizations and individuals to use and contribute to open knowledge.

We work with universities, schools, libraries, archives, museums and more...



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We work with universities, schools, libraries, archives, museums and more...

Helping them understand Wikipedia, Wikimedia Commons, Wikidata, Wiktionary – the freely accessible, multilingual platforms that everyone around the world can use and improve.



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A free and open **database** that anyone can use and edit – under an open license.



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- Main page
  - Community portal
  - Project chat
  - Create a new item
  - Recent changes
  - Random Item
  - Query Service
  - Nearby
  - Help
  - Donate
- Lexicographical data
- Create a new Lexeme
  - Recent changes
  - Random Lexeme
- Tools
- What links here
  - Related changes
  - Special pages
  - Permanent link
  - Page information
  - Wikidata item
- In other projects
- Wikimedia Commons
  - MediaWiki
  - Meta-Wiki
  - Multilingual Wikisource
  - Wikispecies
  - Wikibooks
  - Wikimania
  - Wikinews
  - Wikipedia
  - Wikiquote

The screenshot shows the Wikidata main page interface. At the top, there's a navigation bar with 'Main Page', 'Discussion', 'Read', 'View source', and 'View history' buttons, along with a search box. The main content area features a large 'Welcome to Wikidata' banner with the text 'the free knowledge base with 99,131,968 data items that anyone can edit.' Below the banner are links for 'Introduction', 'Project Chat', 'Community Portal', and 'Help'. A secondary banner asks 'Want to help translate? Translate the missing messages.' The page is divided into two main columns. The left column, titled 'Welcome!', contains text explaining Wikidata as a free and open knowledge base, its role as central storage for structured data, and its support for other Wikimedia projects. The right column, titled 'Learn about data', introduces the concept of data literacy and includes two examples: 'Item: Earth (Q2)' with an image of Earth and 'Property: highest point (P610)' with an image of Mount Everest.

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Wikidata logo

Item [Discussion](#) [Read](#) [Labels list](#) [View history](#) [More](#)

## KBR (Q383931)

National Library of Belgium [edit](#)  
Royal Library of Belgium

[In more languages](#)

| Language | Label                           | Description                               | Also known as   |
|----------|---------------------------------|---|---|
| English  | KBR                             | National Library of Belgium               | Royal Library of Belgium                                  |
| Danish   | KBR                             | Belgiens nationalbibliotek                | Koninklijke Bibliotheek ...<br>Bibliothèque royale de ... |
| German   | KBR                             | Königliche Nationalbibliothek von Belgien | Königlichen Bibliothek ...                                |
| Spanish  | Biblioteca Real de Bélgica      | No description defined                    | Biblioteca Real de Belg...                                |
| Finnish  | Belgian kuninkaallinen kirjasto | No description defined                    |   |
| Polish   | Biblioteka Królewska Belgii     | biblioteka narodowa Belgii                | Biblioteka Narodowa B...                                  |
| Russian  | Королевская библиотека Бельгии  | библиотека                                |   |
| Swedish  | No label defined                | No description defined                    |   |

[All entered languages](#)

### Statements

instance of [national library](#) [edit](#)

[0 references](#) [+ add reference](#)

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## Recent changes

Track the most recent changes to the wiki on this page.

[Other review tools](#) ▾

Active filters

[Human \(not bot\)](#) × [Page edits](#) × [Page creations](#) × [Logged actions](#) ×

☰ Filter changes (use menu or search for filter name)

▶ [Live updates](#)

🔄 [View new changes since 08:43, 6 September 2022](#)

6 September 2022

- ▶ 08:43 [idiotisme \(L701117\)](#) (2 changes | history) .. **(+3,342)** .. [\[Jon Harald Søby \(2×\)\]](#)
- ▶ 08:43 [TYC 4019-3136-1 \(Q81234664\)](#) (diff | hist) .. **(+103)** .. [Renamerr \(talk | contribs\)](#) *(Added [uk] description: зоря в сузір'ї Кассіопеї, batch #97243)* (Tag: [quickstatements](#) [2.0])
- ▶ 08:43 [HD 236458 \(Q86271176\)](#) (diff | hist) .. **(+103)** .. [Renamerr \(talk | contribs\)](#) *(Added [uk] description: зоря в сузір'ї Кассіопеї, batch #97244)* (Tag: [quickstatements](#) [2.0])
- ▶ 08:43 [Yumi Katsura \(Q11536843\)](#) (2 changes | history) .. **(+160)** .. [\[Yxe:h \(2×\)\]](#)
- ▶ 08:43 [TYC 8244-3025-1 \(Q90221963\)](#) (diff | hist) .. **(+101)** .. [Renamerr \(talk | contribs\)](#) *(Added [uk] description: #97237)* (Tag: [quickstatements](#) [2.0])
- ▶ 08:43 [TYC 4019-966-1 \(Q81240703\)](#) (diff | hist) .. **(+103)** .. [Renamerr \(talk | contribs\)](#) *(Added [uk] description: #97245)* (Tag: [quickstatements](#) [2.0])
- ▶ 08:43 [Valentin Osredkar \(Q113757817\)](#) (diff | hist) .. **(+4,225)** .. [Sporti \(talk | contribs\)](#) *(Created a new Item: № (#109640513))* (Tag: [Mix'n'match](#) [1.0])
- ▶ 08:43 [TYC 4023-676-1 \(Q81237916\)](#) (diff | hist) .. **(+103)** .. [Renamerr \(talk | contribs\)](#) *(Added [uk] description: #97245)* (Tag: [quickstatements](#) [2.0])
- ▶ 08:43 [TYC 4015-1575-1 \(Q81237897\)](#) (diff | hist) .. **(+103)** .. [Renamerr \(talk | contribs\)](#) *(Added [uk] description: #97245)* (Tag: [quickstatements](#) [2.0])
- ▶ 08:43 [\[SPD2011\] 21753 \(Q67680071\)](#) (diff | hist) .. **(+88)** .. [Nikosguard \(A\) \(talk | contribs\)](#) *(Added [el] description: ...)*

List of abbreviations:

- r This edit may have reverted the page.
- N This edit created a new page.
- m This is a minor edit.
- b This edit was performed by a bot.
- ! This edit has not yet been reviewed.
- (±123) The page size changed by ±123 bytes.
- 👁 Temporarily watched.

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It's **collaborative!** Edited by thousands of people all around the world.

It's **human-** and **machine-readable!** Welcoming researchers and developers to analyze, re-use and build tools utilizing the data.

```
{
  - entities: {
    - Q383931: {
      pageid: 365290,
      ns: 0,
      title: "Q383931",
      lastrevid: 1687723477,
      modified: "2022-07-25T09:28:55Z",
      type: "item",
      id: "Q383931",
    - labels: {
      - es: {
        language: "es",
        value: "Biblioteca Real de Bélgica"
      },
      - be: {
        language: "be",
        value: "Каралеўская бібліятэка Бельгii"
      },
      - en: {
        language: "en",
        value: "KBR"
      },
      - fi: {
        language: "fi",
        value: "Belgian kuninkaallinen kirjasto"
      },
      - fr: {
        language: "fr",
        value: "KBR"
      },
      - it: {
        language: "it",
        value: "Biblioteca reale del Belgio"
      },
      - la: {
        language: "la",
        value: "KBR"
      },
      - nl: {
        language: "nl",
        value: "KBR"
      },
      - ru: {
        language: "ru",
        value: "Королевская библиотека Бельгии"
      },
      - uk: {
        language: "uk",
        value: "Королівська бібліотека Бельгii"
      },
      - pl: {
```



# All structured and linked

Most importantly, Wikidata is a repository of highly structured, **Linked Open Data**.

This makes the data easy to re-use, query and analyze.

Check out the example queries on <https://query.wikidata.org/>

The image shows a Wikidata profile for Douglas Adams (Q42) with several annotations. The profile includes a label, a description, and a list of statements. The 'educated at' statement is highlighted with a purple box, and its value 'St John's College' is highlighted with an orange box. The 'end time' and 'academic degree' are highlighted with a blue box. The '2 references' section is highlighted with a red box, and the 'Brentwood School' statement is highlighted with a red box. The '0 references' section is highlighted with a red box. The 'opened references' section is highlighted with a red box. The 'collapsed reference' section is highlighted with a red box. The 'property' label is highlighted with a purple box. The 'rank' label is highlighted with a grey box. The 'statement group' label is highlighted with a green box. The 'item identifier' label is highlighted with a grey box. The 'aliases' label is highlighted with a grey box. The 'value' label is highlighted with an orange box. The 'qualifiers' label is highlighted with a blue box. The 'opened references' label is highlighted with a red box. The 'collapsed reference' label is highlighted with a red box.

label — Douglas Adams (Q42) — item identifier

description — English writer and humorist  
Douglas Noël Adams | Douglas Noel Adams — aliases  
▶ In more languages

property — educated at — value

rank —

statement group —

value — St John's College

qualifiers —  
end time 1974  
academic major English literature  
academic degree Bachelor of Arts  
start time 1971

opened references —  
▼ 2 references  
stated in Encyclopædia Britannica Online  
reference URL http://www.nndb.com/people/731/000023662/  
original language of work English  
retrieved 7 December 2013  
publisher NNDB  
title Douglas Adams (English)  
+ add reference

collapsed reference —  
Brentwood School  
end time 1970  
start time 1959  
▶ 0 references  
+ add (statement)

# Users and creators

Thousands of volunteers all around the world.

Large scale imports of freely licensed data.

Museums, archives and libraries can contribute – and benefit.



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Two Swedish museums:

- **Nationalmuseum** (art museum)
- **Statens Historiska Museer** (history museum)

with a keen interest in the Wikimedia platforms.

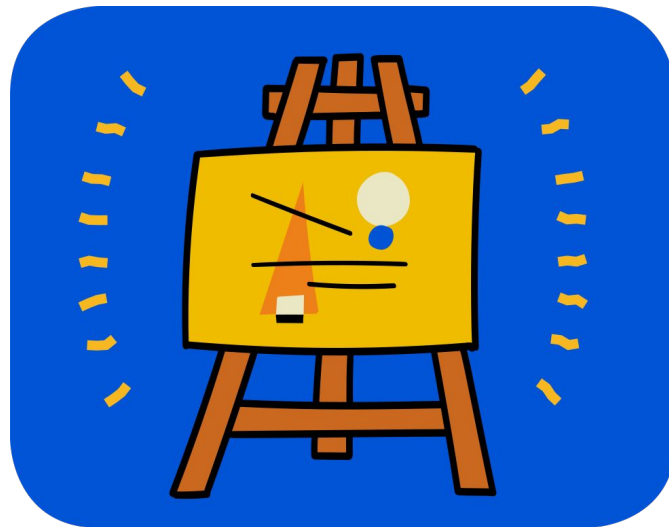


# Working together

## Usable authorities for data-driven cultural heritage research

*Investigate whether vocabularies as Linked Data stimulate new data-driven research on museum collections and whether Wikidata is a suitable platform for linking different authority files and vocabularies.*

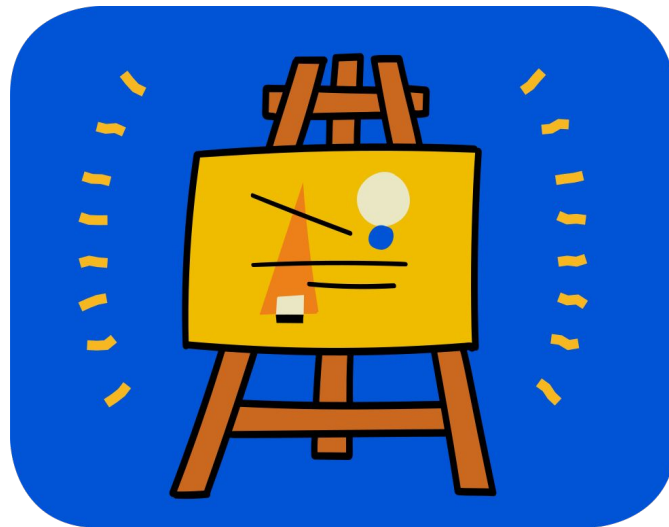
The project is financed by the Swedish National Heritage Board (Riksantikvarieämbetet).



# Working together

Two main parts:

- Upload the data about the people, objects, events in the museums' authority files to Wikidata
- Visualise that data to make it interesting, show connections – to see whether the use of Wikidata can stimulate new data-driven research

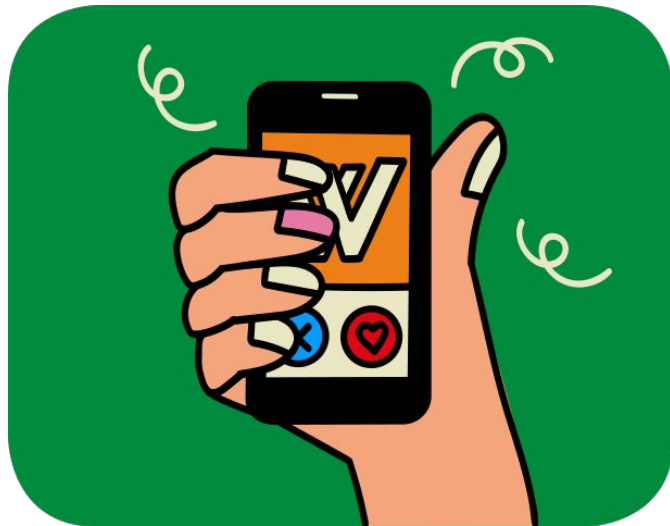


# Welcome to Wikidata!

A small project group with some previous knowledge of Wikipedia, Wikimedia Commons.

Our role: training, ongoing support, providing the right tools...

- How does Wikidata work?
- How are different types of items modeled?
- Querying with SPARQL
- Mass editing with OpenRefine



# A crucial tool

OpenRefine is an **open-source** data wrangling application.

- Analyze your data!
- Clean it up!
- Reconcile it with Wikidata items!
- Upload it to Wikidata!

It's being actively developed and has extensive documentation – so the effort to learn it pays off in the long term.

| LA (code) | EstablishmentN | EstablishmentName  | TypeOfEstablish               |
|-----------|----------------|--|-------------------------------|
| 383       | 8011           | Leeds College of Music<br><a href="#">Choose new match</a>   | Higher education institutions |
| 383       | 8151           | Leeds College of Art<br><a href="#">Choose new match</a>   | Higher education institutions |
| 879       |                | Plymouth College of Art<br><a href="#">Choose new match</a>  | Higher education institutions |
| 908       | 8151           | Falmouth University<br><a href="#">Choose new match</a>  | Higher education institutions |
| 919       |                | University of Hertfordshire<br><a href="#">Choose new match</a>  | Higher education institutions |
| 330       |                | University of Birmingham<br><a href="#">Choose new match</a>   | Higher education institutions |
| 330       |                | University College Birmingham<br><a href="#">Choose new match</a>  | Higher education institutions |
| 330       |                | Newman University, Birmingham<br><input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Newman University (76)<br><input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Create new item<br><a href="#">Search for match</a> | Higher education institutions |
| 330       |                | Aston University<br><a href="#">Choose new match</a>   | Higher education institutions |
| 330       |                | Birmingham City University<br><a href="#">Choose new match</a>   | Higher education institutions |



# OpenRefine

# Clean it up...

OpenRefine turned out to be a great tool to work with the museums' data **internally** and prepare it for a Wikidata sync.

- Discover posts with missing data
- Clean up duplicate posts
- The project gave us opportunity and time to get an overview of what's exactly in there





## Beskow, August

Förnamn August

---

Efternamn Beskow

---

Födelsedatum 1880

---

Dödsdatum 1946

---

Yrke/verksamhet Ämbetsman

---

Externa källor <http://www.wikidata.org/entity/Q5574680>

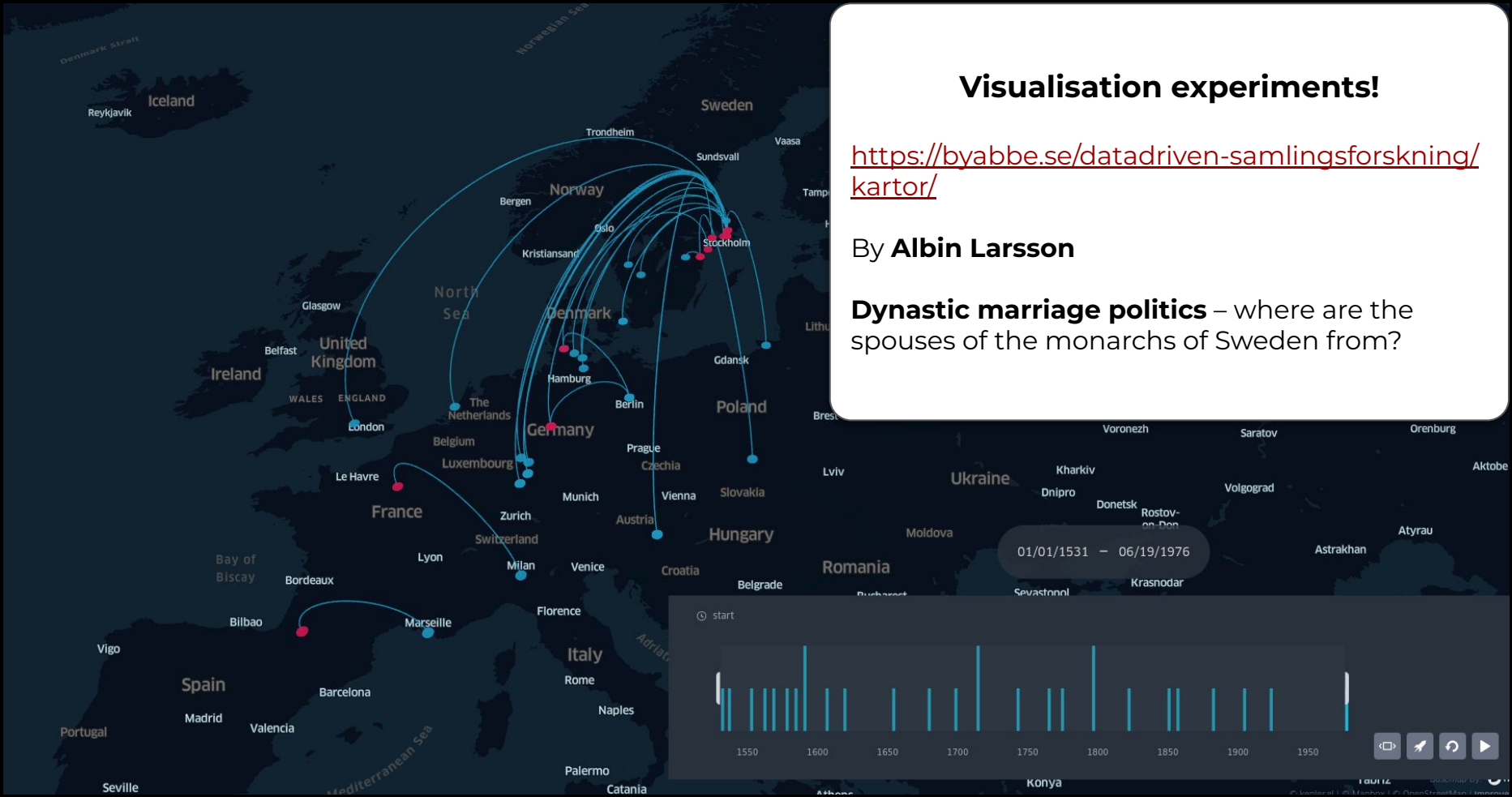
---

## Visualisation experiments!

<https://byabbe.se/datadriven-samlingsforskning/kartor/>

By **Albin Larsson**

**Dynastic marriage politics** – where are the spouses of the monarchs of Sweden from?



Gösta Florman ▼

Nationalmuseum, 5 av 5 ↻



Statens historiska museer, 5 av 38 ↻



## Visualisation experiments!

<https://byabbe.se/datadriven-samlingsforskning/jamforelse/>

By **Albin Larsson**

**Comparison** – works by an artists in the collections of the two museums

# Skills involved

- SPARQL
- GREL
- Wikidata structure
- Wikidata community norms
  - how to create a property?
  - what are the notability criteria?
  - who can delete items?
  - how to discuss with others?



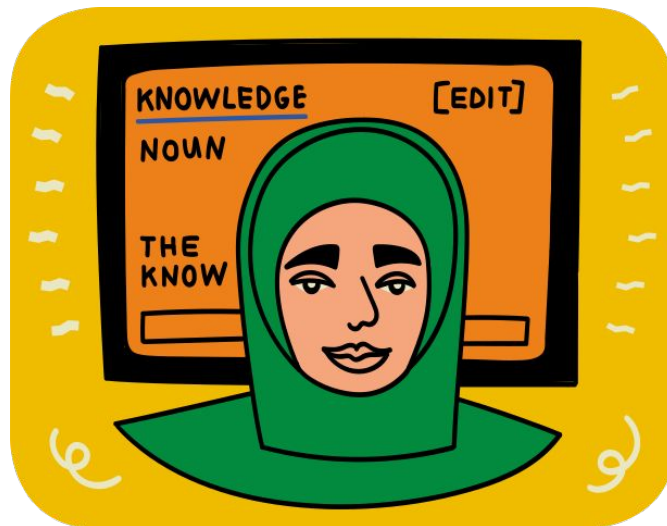
# Why?

Wikidata is an important part of the modern LOD landscape – a **hub** where data from many sources comes together.

An institution can benefit from the work of the global community to verify and **enrich** their own authority posts.

In-house **Wikidata expertise** benefits the institution in the long term and can be shared with others.

Supporting **free and open knowledge** is always right!



# Thank you for your attention!

Get in touch with us:

Alicia Fagerving  
WMSE x GLAM  
[alicia.fagerving@wikimedia.se](mailto:alicia.fagerving@wikimedia.se)

Albin Larsson  
visualisations  
[albin.post@gmail.com](mailto:albin.post@gmail.com)

