# Open Museum Guidebooks

Team Data Science, HsH

2025-06-16

ii

# Table of contents

# Welcome

The idea! Museum have a calendar of exhibitions and a catalogue of what is on display in any give show. But this is not publishing in data repositories.

Welcome to 'Open Museum'! If museums made deposits of open data of what's on show - then their visitors could make 'play lists' of their favourite works and share them online.

The 'Open Museum' pitch is that the public take part in this cataloguing and a Citizen Science Experience.

The prototype 'Open Museum Guidebooks' has outlined the idea and is sharing the 'how to' model using Wikibase as a foundation. We believe all the infrastructure is already out there and with luck museums back catalogues could be online in no time (famous last words).

—

Project inspired by the 1700s database - Corpus Johann Joachim Winckelmanns (1717–1768). Census.de

# Chapter 1

# Guide: Architecture Timeline - Sprengel Museum

Description: Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae pellentesque sem placerat. In id cursus mi pretium tellus duis convallis. Tempus leo eu aenean sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.

Created by: User name, date

Timeline embed:

## 1.1 Timeline

## 1.2 Map

```
<folium.folium.Map at 0x26e52fe12a0>
```

# Chapter 2

# Guide: Architecture (exterior) - Sprengel Museum

Description: Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae pellentesque sem placerat. In id cursus mi pretium tellus duis convallis. Tempus leo eu aenean sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.

Created by: User name, date

```
<folium.folium.Map at 0x21b2f4d5750>
```

# Chapter 3

# Guide: Architecture (interior) - Sprengel Museum

Description: Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae pellentesque sem placerat. In id cursus mi pretium tellus duis convallis. Tempus leo eu aenean sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.

Created by: User name, date

```
<folium.folium.Map at 0x22d57e7e950>
```

# Chapter 4

# Guide: Public Art - Sprengel Museum

Description: Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae pellentesque sem placerat. In id cursus mi pretium tellus duis convallis. Tempus leo eu aenean sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.

Created by: User name, date

```
<folium.folium.Map at 0x151d5686bf0>
```

# About

The idea! Museum have a calendar of exhibitions and a catalogue of what is on display in any give show. But this is not publishing in data repositories.

Welcome to 'Open Museum'! If museums made deposits of open data of what's on show - then their visitors could make 'play lists' of their favourite works and share them online.

The 'Open Museum' pitch is that the public take part in this cataloguing and a Citizen Science Experience.

The prototype 'Open Museum Guidebooks' has outlined the idea and is sharing the 'how to' model using Wikibase as a foundation. We believe all the infrastructure is already out there and with luck museums back catalogues could be online in no time (famous last words).

Project inspired by the 1700s database - Corpus Johann Joachim Winckelmanns (1717–1768). Census.de

1. Use case

- A museum visitor makes a list of items that are significant to them and they want to share. The list shows the item on a map and as a table, with links to more information and data.
- A person finds the list online and make a visit to the museum.
- The public catalogues exhibition dates and information on Wikidata. The public catalogues items on display in an exhibition.

2. Value proposition

- The public can learn about chosen topics using museums.
- The public can learn data science skills.
- Museums can attract more visitors.
- Museums can support deep learning in their respective knowledge domains.
- A permanent record of museums work will be created.

3. Persona and storyboard (needs / blocking)

- Musuem visitor: Needs: The visitor want to share info with friends and family about their favourite artworks. Blocking: The museum has no data feed of exhibition dates or what is being exhibited. If the visitor wanted to share the information it would be a long, long, labour of love.
- Musuem exhibition organiser: Needs: Visitors and engagement. Blocking: No exhibition data available for people to find out about contemporary or past exhibitions. The museum should have all this data but is not making it public.
- Special interest group (Climate change education group): Need: Ensure access understanding of climate change is represented in regional museums. The group would contribute volunteer time to cataloging efforts and outreach. Blocking: Not able to find dates of exhibitions or information about what was exhibited.

4. Problem / solution

Problem: A museum visitor cannot share information about exhibitions or the exhited items as museums don't publish this data.

Solution: Support museums visitors to publish and use the data as a citizen science project 'Open Musuem'. The data is has two parts: A. A calendar of exhibitions, and B. A catalogue of items in an exhibition. Both of these data would be catalogues and indexed using Wikimedia infrastructure.

5. A schematic

# Wikibase - Making a Guide

This is a workflow to create a museum guide based on an Linked Open Data utilising Wikidata, Wikimedia Commons, Wikibase, and Wikipedia.

The guide and its items are stored in a Wikibase instance. Most of the data used in the items are pulled from Wikimedia Commons. If Wikidata entries exist, they will be linked to the items.

The goal is to make existing data usuable for the museum and the generated information accessible to the public.

# Foundational Assumptions / Ideal World Vision

The Open Museum (Idea World Vision)

- All artwork from exhibitions, architecture, and public art is databased with pictures and geolocation on *Wikimedia Commons*
- Some items have *Wikidata* and *Wikipedia* entries
- A calendar of a museums exhibitions exists in *Wikidata*

# Guide data model

Our example guide has 9 items. Because 9 is a magic number!

(= has 9 Guide items)

## A Guidebook list

- **Title / ID (mandatory)**
- Authors
- Creation date
- Description
- **List of guide items (mandatory)**
- Location
- Category (from Wikimedia Commons?)

| Label | Example Value | Datatype | Note |
|---|---|---|---|
| Title | *Sprengel Guide* or *Q001* | Text | mandatory. can be a Q-number |
| Author | *Erika Mustermann* | String, or maybe Item if we have user accounts | optional, repeatable. |
| Creation Date | *2025-04-07* | Point in Time | optional |
| Description | *Guide to the public art around Sprengel museum.* | String | optional |
| Guide Item | *Another Twister* | Item | mandatory, repeatable. for 9 items we need 9 of these entries |
| Location | *Hanover* | String | optional |
| Category | *Images of Sculptures* | String | optional |

## A Guide Item

(= part of Guide object)

- Title
- Picture
- Geolocation / coordinates
- Description
- Wikidata ID (if available)

→ ideally, all this info can be taken from Wikimedia Commons

| Label | Example Value | Datatype | Note |
| --- | --- | --- | --- |
| Title | *Another Twister* or *Q20* | String | |
| Picture | *Another_Twister.jpg* | Commons media file | automatically searches the *File:* namespace on Commons |
| Geolocation | *52.363442, 9.739542* | Geographic coordinates | |
| Description | *Sculpture by Alice Aycock* | String | |
| Wikidata ID | *Q523722* (transforms to *https://www.wikidata.org/wiki/Q523722*) | External identifier | can be used to get additional information, such as links to Wikipedia. the property has to be set up with a formatter URL |

## Possible Additions

### Timeline

$\rightarrow$ for an overview of architecture

$\rightarrow$ take one building (Sprengel museum) and document when its individual buildings were added

## Related work

https://calnfynn.github.io/KarteHannover/

# Citizen Science

Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae pellentesque sem placerat. In id cursus mi pretium tellus duis convallis. Tempus leo eu aenean sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.

Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae pellentesque sem placerat. In id cursus mi pretium tellus duis convallis. Tempus leo eu aenean sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.

## Learning materials

https://computational-publishing-service.wikibase.cloud/wiki/Transfer_Commons_Images_to_Wikibase#QuickSta

https://nfdi4culture.gitlab.io/computational-publishing-service/cps-documentation/guide/2_importing_data_with_

# Data Models

## A Guidebook list

- **Title / ID (mandatory)**
- Authors
- Creation date
- Description
- **List of guide items (mandatory)**
- Location
- Category (from Wikimedia Commons?)

| Label | Example Value | Datatype | Note |
|---|---|---|---|
| Title | *Sprengel Guide* or *Q001* | Text | mandatory. can be a Q-number |
| Author | *Erika Mustermann* | String, or maybe Item if we have user accounts | optional, repeatable. |
| Creation Date | *2025-04-07* | Point in Time | optional |
| Description | *Guide to the public art around Sprengel museum.* | String | optional |
| Guide Item | *Another Twister* | Item | mandatory, repeatable. for 9 items we need 9 of these entries |
| Location | *Hanover* | String | optional |
| Category | *Images of Sculptures* | String | optional |

## A guidebook list item

(= part of Guide object)

- Title
- Picture
- Geolocation / coordinates
- Description
- Wikidata ID (if available)

→ ideally, all this info can be taken from Wikimedia Commons

| Label | Example Value | Datatype | Note |
|---|---|---|---|
| Title | *Another Twister* or *Q20* | String | |
| Picture | *Another_Twister.jpg* | Commons media file | automatically searches the *File:* namespace on Commons |
| Geolocation | *52.363442, 9.739542* | Geographic coordinates | |
| Description | *Sculpture by Alice Aycock* | String | |
| Wikidata ID | *Q523722* (transforms to *https://www.wikidata.org/wiki/Q523722*) | External identifier (W2387820) | can be used to get additional information, such as links to Wikipedia. the property has to be set up with a formatter URL |

# An image map

# A timeline

# A publication

# A publication deposit

# Learning materials

https://tib.eu/cloud/s/nKKnQgHgyLn66Fw#h-data-model-creation-a-step-by-step-guide