

Best practices for reusing Wikidata's data in the Wikimedia Projects

User:Mike Peel

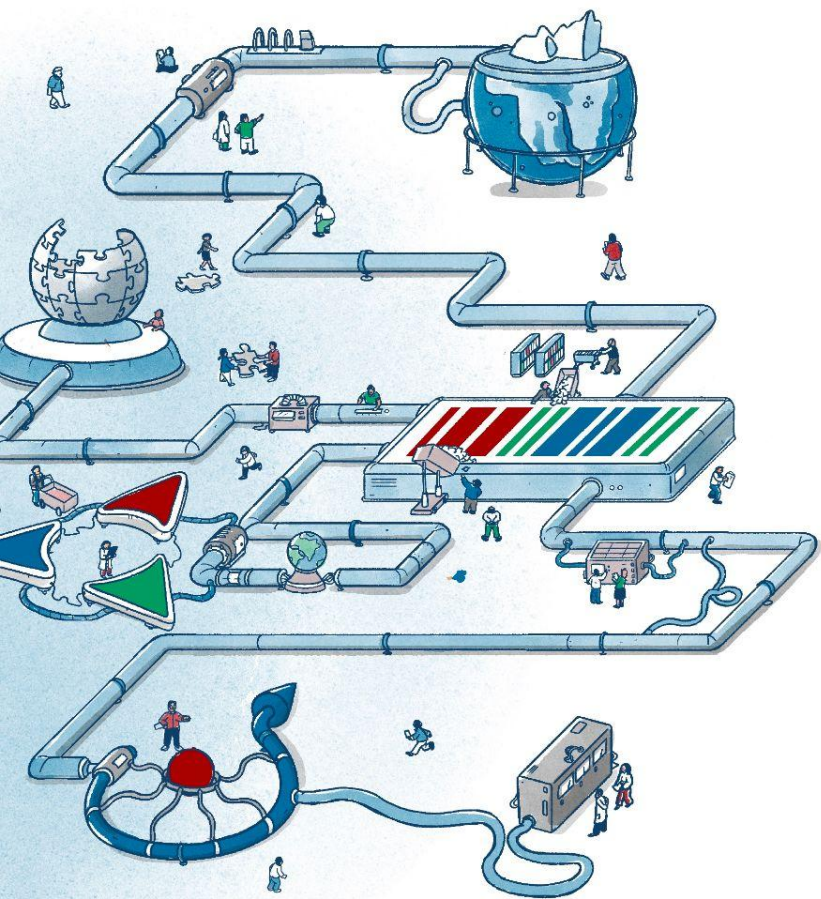
30 May 2025

This session is recorded: Please mute your microphone and camera when you're not speaking.

**Wikidata and
Sister Projects**
May 29 - June 01, 2025

Best practices for reusing Wikidata's data in the Wikimedia Projects

- How to transclude Wikidata content into Wikimedia projects
- Examples of current use
- The tricky parts...



How to transclude Wikidata content into Wikimedia projects

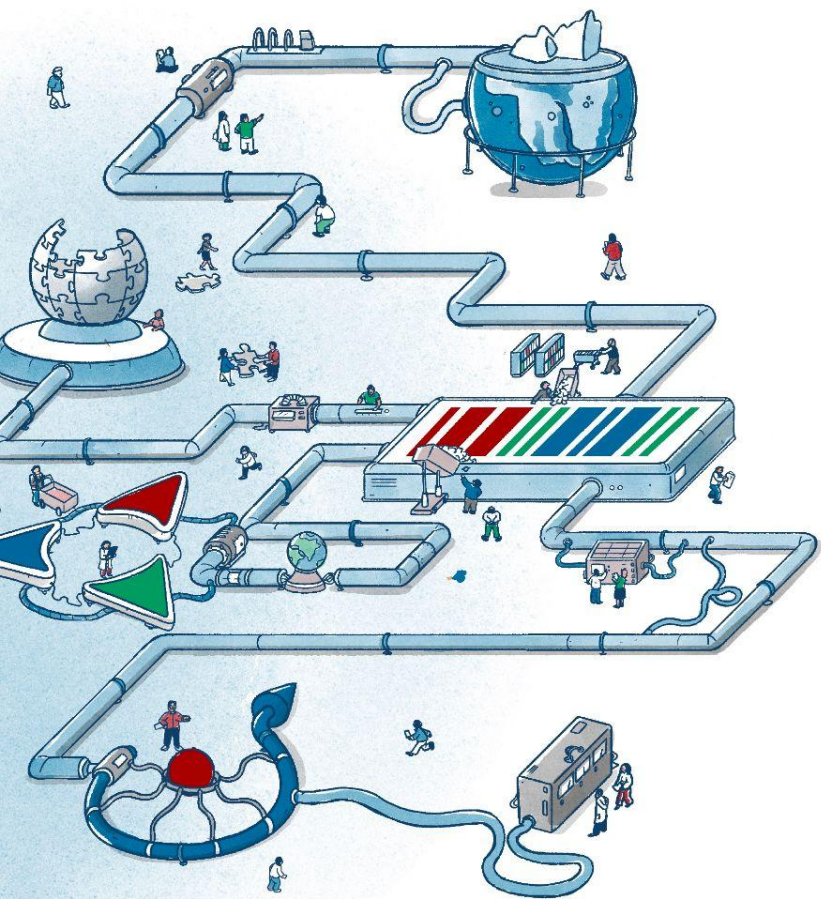
Getting content out of Wikidata

- Lua Scribunto interface
 - https://www.mediawiki.org/wiki/Extension:Wikibase_Client/Lua
- Can access directly in Lua codes, or in templates
 - `{{#statements:P1476|from=Q191380}}` will display "Notre-Dame de Paris"
- Module:WikidataIB - flexible Wikidata module

Overview [\[edit source \]](#)

The module provides these calls specifically for use in infoboxes at present:

1. `getValue` - main call, used to get the value(s) of a given property
2. `getQualifierValue` - given: (1) a property; (2) its value; (3) a qualifier's propertyID, returns values which match
3. `getValueByQual` gets the value of a property which has a qualifier with a given entity value
4. `getValueByLang` gets the value of a property which has a qualifier P407("language of work or name") whose value has the given language code
5. `getValueByRefSource` gets the value of a property which has a reference "stated in" (P248) whose value has the given entity-ID
6. `getPropOfProp` if the value(s) of prop1 are of type "wikibase-item" then it returns the value(s) of prop2 of each of those wikibase-items
7. `getAwardCat` if the item has values of P166 (award received), then it examines each of those awards for P2517 (category for recipients of this award) and it returns the corresponding category, with the item's P734 (family name) as sort key, or no sort key if there is no family name
8. `getIntersectCat` for each value of the prop1 it fetches the value's main category and then each value of prop2, then it returns all of the categories representing the intersection of those properties
9. `getSumOfParts` scans the property 'has part' (P527) for values matching a list. If the matched values have a qualifier 'quantity' (P1114), those quantities are summed and returned (but zero returns nil)
10. `getCoords` gets coordinates and passes them through `{{Coord}}`



Examples of current use

Wikidata Infobox on Wikimedia Commons

Wikidata and Sister Projects
[Collapse]

Wikidata and Sister Projects
May 29 - June 01, 2025

[Upload media](#)

Instance of	online event
Main subject	Wikidata Wikimedia sister projects
Start time	29 May 2025
End time	1 June 2025

[official website](#)

Authority file [Collapse]

 [Q134608373](#)

[Reasonator](#) • [Scholia](#) • [Wikidocumentaries](#) • [PetScan](#) • [statistics](#) • [WikiMap](#) • [Locator tool](#) • [KML file](#) • [Search depicted](#)



- Started in 2018, bot-deployed in 5.4 million Commons categories!
- Small infobox to add context for category contents, without hiding category contents
- Using Wikidata information only (no local definitions) - completely multilingual
code: {{Wikidata Infobox}}
- Images on Wikidata shown alongside Commons category - are best images selected? (+ night image, map, ...?)
- Authority control at the bottom
- Continuous development with community input and suggestions

Telescope at the South Pole



The South Pole Telescope in November 2009

[Upload media](#) [Wikipedia](#)

Instance of Gregorian telescope, radio telescope, cosmic microwave background experiment

Part of Amundsen–Scott South Pole Station, Event Horizon Telescope

Named after South Pole

Location South Pole, Antarctic Treaty area

Service entry 16 February 2007

Significant event construction (2006–2007)

Mass 280 t

Diameter 10 m (primary mirror)
1 m (secondary mirror)

Angular resolution 1"

Area 78.5 m²

Elevation above sea level 2.8 km

Replaces Antarctic Submillimeter Telescope and Remote Observatory

[official website](#)

[+](#) [−](#)

[Wikimedia maps](#) [I Map data](#)

[Authority control](#) [Hide]

[Reasonator](#) [PetScan](#) [Scholia](#) [Statistics](#) [OpenStreetMap](#) [Locator tool](#) [WikiShootMe](#) [Search depicted](#)

[Q1513315](#)

Гігантський український радіотелескоп [сховати]

Низькочастотний радіотелескоп, що будувється і застосовується для досліджень в РІ НАНУ (Україна)



[Завантажити медіафайл](#) [Wikipedia](#)

Є одним із радіотелескоп, Фазована антенна решітка

Місце розташування Харківська область, Україна

Оператор Радіоастрономічний інститут НАН України

Складники УТР-2



[Нормативний контроль](#) [сховати]

[Reasonator](#) [PetScan](#) [Scholia](#) [Статистика](#) [OpenStreetMap](#) [Locator tool](#) [WikiShootMe](#) [Шукати зображення](#)

[Q12098684](#)

[Giant Ukrainian Radio Telescope](#)

Lydia Pintscher [ausblenden]

deutsche Informatikerin



Lydia Pintscher in 2015

[Medium hochladen](#)

Geburtsdatum 20. Juli 1984

Land der Staatsangehörigkeit Deutschland

Besuchte Bildungseinrichtung Karlsruher Institut für Technologie (Diplom, Informatik, 2003–2011)

Tätigkeit Produktmanager (Wikidata), Informatiker, Wikimedianer, Forscher

Arbeitgeber Wikimedia Deutschland

Mitglied von KDE

Arbeitsgebiet Wikidata

Muttersprache Deutsch

Auszeichnung Academy Award - Best Non-Application Contribution (2012)

[Offizielle Website](#)

Normdatei [ausblenden]

[VIAF-Kennung: 308186519](#) [BnF-Kennung: 16755328n](#) [IdRef-Normdatenkenning: 193899159](#) [IMDb-ID: nm9478669](#) [ORCID-Kennung: 0000-0002-3939-2115](#) [GitHub-Benutzername: lydiapintscher](#)

[Reasonator](#) [PetScan](#) [Scholia](#) [Statistik](#) [OpenStreetMap](#) [Locator tool](#) [WikiShootMe](#) [Nach diesem Motiv suchen](#)

グランドバード [非表示]



2019年当時のグランドバード

[メディアをアップロード](#)

分類 電波望遠鏡, 宇宙マイクロ波背景放射観測実験

以下の一部分 テイデ天文台

場所 テネリフェ島, 大西洋

直径 30 cm

周波数 145 GHz
220 GHz

角度分解能 0.5 ° (150 GHz)
0.3 ° (220 GHz)

標高 2,400 m



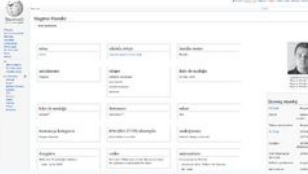
[Wikimedia maps](#) [I Map data](#)

[典拠管理](#) [非表示]

[Reasonator](#) [PetScan](#) [Scholia](#) [統計学](#) [オープンストリートマップ](#) [Locator tool](#) [WikiShootMe](#) [検索 題材](#)

[Q57337386](#)

MediaWiki extension to create automatic article placeholders



[Upload media](#)

Instance of MediaWiki extension, free software

Main subject Wikidata based stubs and summaries

Authority control [Hide]

[Reasonator](#) [PetScan](#) [Scholia](#) [Statistics](#) [OpenStreetMap](#) [Locator tool](#) [Search depicted](#)

[Q21676433](#)

[Hide]

NO WIKIDATA ID FOUND!

Search for Ukrainian Wikiversity on Wikidata

Create new Wikidata item

Upload media

(when no Wikidata is sitelinked)

Wikipedia Infoboxes

Ato Institucional Número Cinco

ATO INSTITUCIONAL Nº 5, DE 13 DE DEZEMBRO DE 1968

O PRESIDENTE DA REPÚBLICA FEDERATIVA DO BRASIL, ouvido o Conselho de Segurança Nacional, e

CONSIDERANDO que a Revolução Brasileira de 31 de março de 1964 teve, conforme decorre das Atos que a ela se institucionalizam, fundamentos e propósitos que visavam a dar ao país um regime que, atendendo às exigências de um sistema jurídico e político, assegurasse autêntica ordem democrática, baseada na liberdade, no respeito à dignidade da pessoa humana, no contato a subversão e à ideologia contrária às tradições de nosso povo, na luta contra a corrupção, buscando, deste modo, "as mais indispensáveis à ordem de reconstrução econômica, financeira política e moral do Brasil, de maneira a poder enfrentar, de modo direto e imediato, os graves e urgentes problemas de que dependem a restauração da ordem interna e do prestígio internacional da nossa pátria" (Resolução do Ato Institucional Nº 1, de 9 de abril de 1964).

[Assinatura]

Data 13 de dezembro de 1968

Local de assinatura [Brasília](#)

País [Brasil](#)

Tipo de documento [Atos Institucionais](#)

Número de páginas 9

Signatários [\[Esconder\]](#)

Costa e Silva
Luís Antônio da Gama e Silva
Augusto Rademaker
Aurélio de Lira Tavares
Magalhães Pinto
Antônio Delfim Netto
Mário Andreazza
Ivo Arzuza Pereira
Tarso Dutra
Jarbas Passarinho
Márcio de Sousa Melo
Leonel Tavares Miranda de Albuquerque
José Costa Cavalcanti
Edmundo de Macedo Soares e Silva
Hélio Beltrão
Afonso Augusto de Albuquerque Lima
Carlos Furtado de Simas

Arquivo digitalizado no Wikimedia Commons

Arquivo transcrito no Wikisource


[Ato Institucional n.º 4](#) [Ato Institucional n.º 6](#)

[\[edite no Wikidata\]](#)

- More complicated on Wikipedias
- Many different infoboxes covering different topics, different layouts etc.
- Consensus varies between Wikipedias (wide deployment on Catalan, tricky on English, others mixed).
- Some Wikipedias require referenced Wikidata information only (please add your references!)
- Automatically update when content is added to Wikidata. Add a picture on Wikidata -> it immediately appears in infoboxes across many languages.
- Improves cross-Wikimedia integration.

Wikidata-powered lists on Wikipedia (and other projects)

- Can quickly create lists using Wikidata information, based on Wikidata queries, that are transposed on (some) mainspace Wikipedias
- Whatever you can fetch using a Wikidata query, you can turn into a list (Listeriabot)
- As Wikidata updates, so does the list
- Works across different languages using the same dataset



WIKIPÉDIA
A enciclopédia livre

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[Eventos atuais](#)
[Espanada](#)
[Página aleatória](#)
[Portais](#)
[Informar um erro](#)

[Colaboração](#)
[Boas-vindas](#)
[Ajuda](#)
[Página de testes](#)
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Artigo

Discussão

Ler

Editar

Editar código-fonte

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Lista de pinturas no Museu Victor Meirelles

Eliminação

Manutenção

#R

Esboço

Busca

Informações

Mover

Pedido

Listar

[seguir]

Qualidade prevista pelo ORES: undefined (3,13)

Origem: Wikipédia, a enciclopédia livre.
Wikidata: Lista de pinturas no Museu Victor Meirelles (Q65164835), no description given
Alias: None

Wikidata: Lista de pinturas no Museu Victor Meirelles (Q65164835), descrição não definida
Também conhecido como: Nenhum

A **lista de pinturas no Museu Victor Meirelles** reúne obras de arte que fazem parte do acervo do **Museu Victor Meirelles**. O acervo é constituído de obras de **Victor Meirelles** e de seus professores e alunos.^{[1][2]}

Esta lista é gerada a partir dos dados do Wikidata e é atualizada periodicamente por um robô.[?]
Edições feitas no conteúdo da lista serão removidas na próxima atualização!

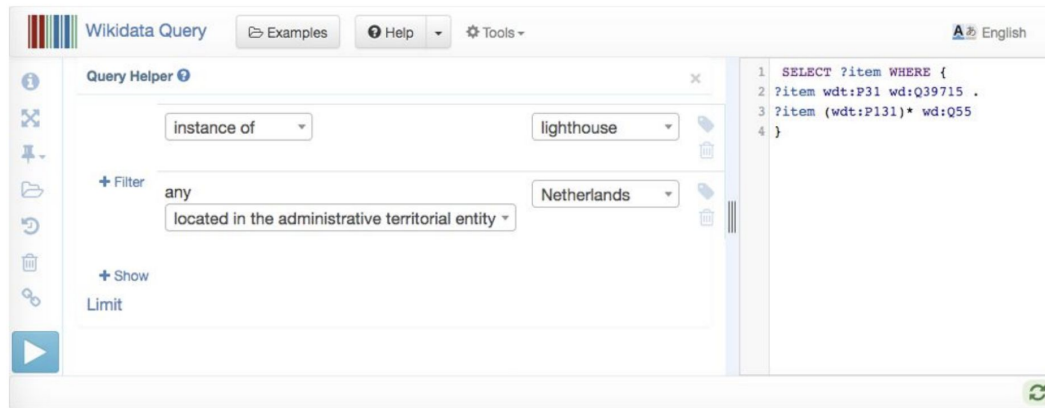
Atualizar a lista automaticamente agora: ? ! SPARQL ? ! Pesquisar imagens: ?

Imagem	Título	Criador	Data	Descrito em
	<i>Cabeça de homem</i>	Victor Meirelles		[1] ?
	<i>Cabeça de homem</i>	Victor Meirelles		[2] ? [3] ?

Wikidata queries

- SPARQL querying is powerful, but writing them in the right format can be tricky
 - [Wikidata:Request_a_query](#) can help!
- Only Wikidata content: can't edit the lists locally, and local changes will be lost

query.wikidata.org



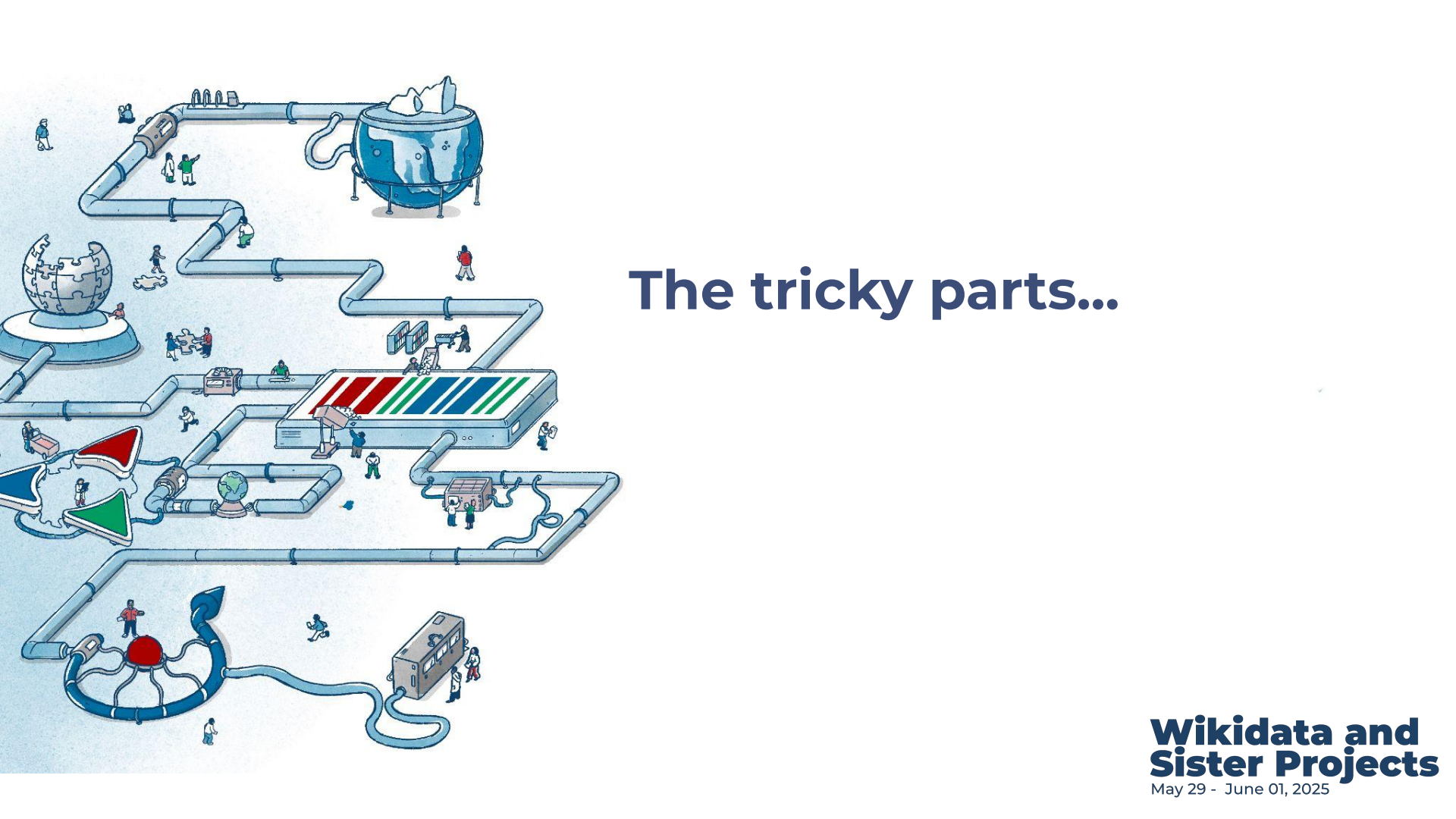
Cite Q for automatically generated citations

- Currently millions of Wikidata items for journal articles - part of Wikicite
- Can use this information to build structured references using Wikidata QID
- Can be used in any language!
- Automatically link to DOIs, author names, etc.
- Can auto-update all, e.g., preprint -> publication, or if a paper is withdrawn/replaced

```
<ref>{{Cite journal|author = J. E. Carlstrom|title = The 10 Meter South Pole Telescope |journal = Publications of the Astronomical Society of the Pacific |volume = 123 |issue = 903 |pages = 568–581 |arxiv = 0907.4445 |display-authors=etall|year = 2011 |doi = 10.1086/659879 |bibcode=2011PASP..123..568C}}</ref>
```

<ref>{{Cite Q|Q56603073}}</ref>

^ ^a ^b [J. E. Carlstrom](#); P. A. R. Ade; K. A. Aird; et al. (May 2011). "The 10 Meter South Pole Telescope". *Publications of the Astronomical Society of the Pacific*. **123** (903): 568–581. [arXiv:0907.4445](#) . [Bibcode:2011PASP..123..568C](#) . [doi:10.1086/659879](#) . [ISSN 0004-6280](#) . [Wikidata Q56603073](#).



The tricky parts...

Wikidata and Sister Projects

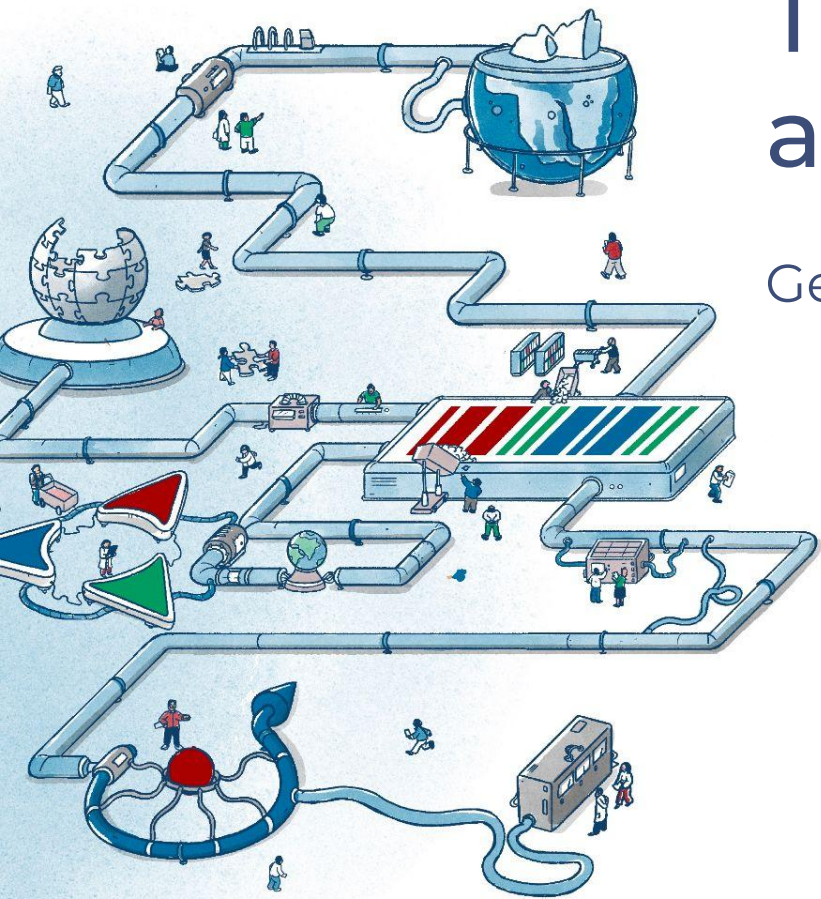
May 29 - June 01, 2025

The tricky parts... Technical

- Mostly solved, but complicated
- Built-in Lua functions get you part of the way
- WikidataIB gets you most of the rest
- Getting formatting right is often the most difficult thing
- #ifexist is finally fixed!
- Listeria is definitely a hack - would be nice to include queries directly in articles...
- Wikidata Bridge to edit in-place would be nice

The tricky parts... Social

- The key part!
- Community has to want and support Wikidata integration - without this it's an uphill struggle.
- "Not made on this wiki" is a thing!
- Have to iterate with the community to make sure integration is working exactly as they want it
- E.g., Wikidata Infobox on Commons is collaboratively developed with the wider community and frequently iterated on!
- What works on one wiki might not work on another



Thanks for your attention!

Get in touch:

User talk:Mike Peel

Questions?