



**Universität  
Zürich**<sup>UZH</sup>

Department of Informatics – Dynamic and Distributed Information Systems Group



# Wikidata

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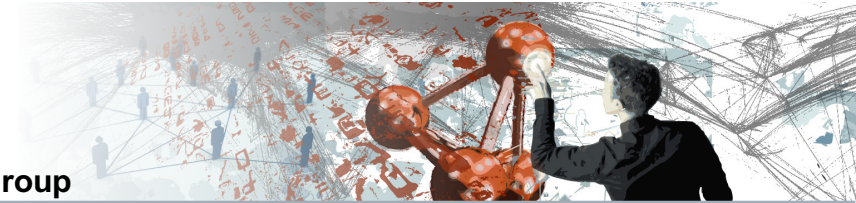
University of Zurich

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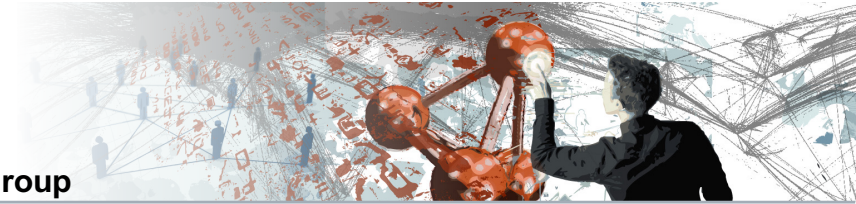


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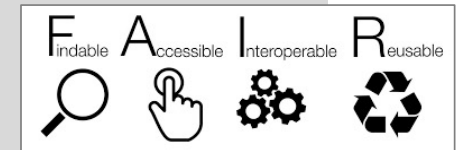
# Introduction to Wikidata



## Wikidata: a Special Open Knowledge Graph



- Knowledge Graph/ Knowledge Base
- Open (CC0 License)
- Humans and machines involved in the curation and maintenance of the KG
- Community-driven
- Multilingual
- Interlinking hub
- Secondary source
- Plurality



Denny Vrandečić and Markus Krötzsch. (2014). Wikidata: A Free Collaborative Knowledge Base. Communications of the ACM 57, 10 (October 2014), 78–85. DOI:<https://doi.org/10.1145/2629489>



## Motivation

Machine  
readability

Article Talk

Read Edit source View history Search Wikipedia

**Movement Strategy: Review the draft Direction statement and give feedback**

### Zürich

From Wikipedia, the free encyclopedia  
(Redirected from *Zurich*)

Coordinates: 47°22′N 8°33′E﻿ / ﻿47.367°N 8.550°E﻿ / 47.367; 8.550

*For other uses, see [Zürich \(disambiguation\)](#).*

**Zürich** or **Zurich**<sup>[note 1]</sup> (/ˈzɪʊərɪç, -ɪk/ ***ZEW-ik***) is the **largest city in Switzerland** and the capital of the **canton of Zürich**. It is located in north-central Switzerland<sup>[3]</sup> at the northwestern tip of Lake Zürich. The municipality has approximately 400,028<sup>[4]</sup> inhabitants, the urban agglomeration 1.315 million<sup>[5]</sup> and the **Zürich metropolitan area** 1.83 million.<sup>[6]</sup> Zürich is a hub for railways, roads, and air traffic. Both **Zürich Airport** and **railway station** are the largest and busiest in the country.

Permanently settled for about 2000 years, Zürich was founded by the **Romans**, who, in 15 BC, called it *Turicum*. However, early settlements have been found dating back more than 6400 years ago.<sup>[7]</sup> During the Middle Ages, Zürich gained the independent and privileged status of **imperial immediacy** and, in 1519, became a primary centre of the **Protestant Reformation** in Europe under the leadership of **Huldrych Zwingli**.<sup>[8]</sup>

The official language of Zurich is **German**<sup>[note 2]</sup>, but the main spoken language is the local variant of the **Alemannic Swiss German** dialect. Many museums and art galleries can be found in the city, including the **Swiss National Museum** and the **Kunsthhaus**.<sup>[9]</sup> **Schauspielhaus Zürich** is one of the most important theatres in the German-speaking world.<sup>[10]</sup>

Zürich is a leading **global city** and among the world's largest financial centres despite having a relatively small population.<sup>[11]</sup> The city is home to a large number of financial institutions and banking giants. Most of Switzerland's research and development centres are concentrated in Zürich and the low tax rates attract overseas companies to set up their headquarters there.

**Monocle's** 2012 "Quality of Life Survey" ranked Zürich first on a list of the top 25 cities in the world "to make a base within".<sup>[12]</sup> According to several surveys from 2006 to 2008, Zürich was named the city with the **best quality of life** in the world as well as the wealthiest city in Europe.<sup>[13][14][15]</sup> The **Economist Intelligence Unit's** Global Liveability Ranking<sup>[16]</sup> sees Zürich rank among the top ten most liveable cities in the world.

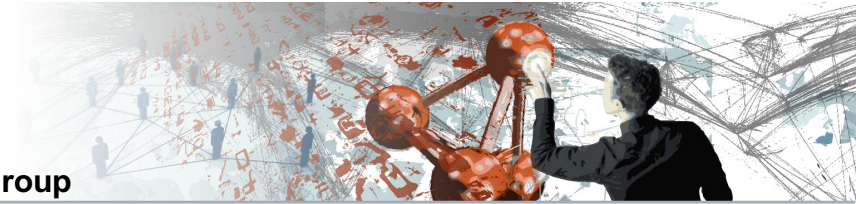
**Contents** [hide]

Coordinates: <span><span><span><span><span>47°22′N</span> <span>8°33′E</span></span></span><span><span>﻿</span> / <span>﻿</span></span><span><span>47.367°N 8.550°E</span><span><span>﻿</span> / <span>47.367; 8.550</span></span></span></span></span>	
Country	Switzerland
Canton	Zürich
District	Zürich
Government <span></span>	
<span> </span> • <span> </span> Executive	<i>Stadtrat</i> <div>with 9 members</div>
<span> </span> • <span> </span> Mayor	<i>Stadtpräsidentin</i> (list) <div>Corine Mauch SPS/PSS (as of February 2014)</div>
<span> </span> • <span> </span> Parliament	<i>Gemeinderat</i> <div>with 125 members</div>
Area <span><sup>[1]</sup></span>	
<span> </span> • <span> </span> Total	87.88 <span> </span> km <sup>2</sup> (33.93 <span> </span> sq <span> </span> mi)
Elevation <span></span>	408 <span> </span> m (1,339 <span> </span> ft)
Highest <span> </span> elevation <span><span> </span>(Uetliberg)</span>	871 <span> </span> m (2,858 <span> </span> ft)
Lowest <span> </span> elevation <span><span> </span>(Limmat)</span>	392 <span> </span> m (1,286 <span> </span> ft)
Population <span>(Dec 2016<sup>[2]</sup>)</span>	
<span> </span> • <span> </span> Total	402,762
<span> </span> • <span> </span> Density	4,600/km <sup>2</sup> (12,000/sq <span> </span> mi)
Demonym(s)	German: <i>Zürcher(in)</i>
Postal code	8000–8099
SFOS number	0261
Surrounded by	Adliswil, Dübendorf, Fällanden, Kilchberg, Maur, Oberengstringen, Opfikon, Regensdorf, Rümlang, Schlieren, Stälikon, Uitikon, Urdorf, Wallisellen, Zollikon
Twin towns	Kunming, San Francisco, Srinagar
Website	<span>www.stadt-zuerich.ch</span> <span>SFOS statistics</span>

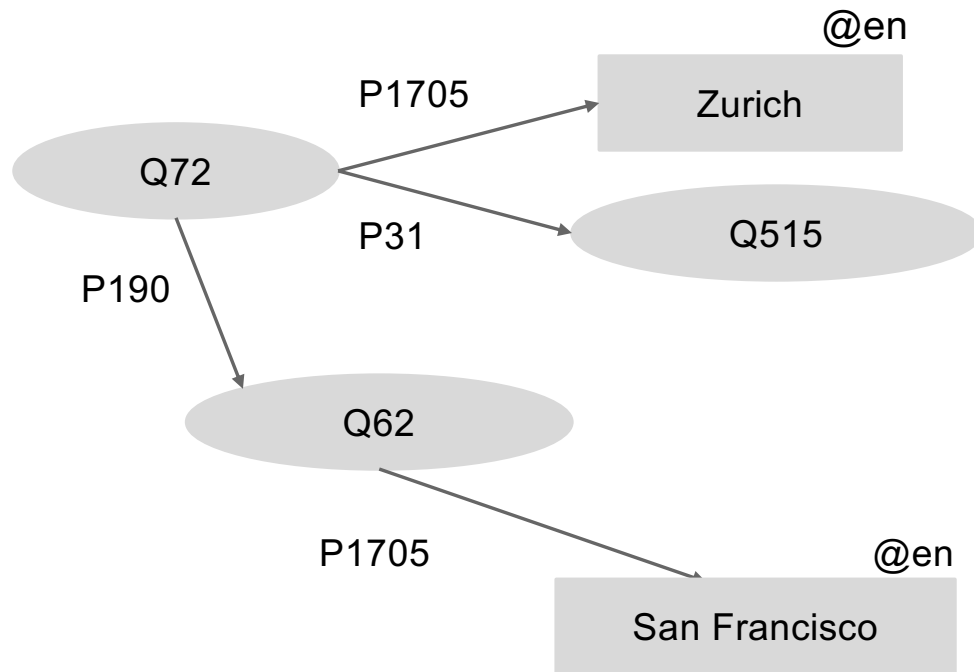
Information  
Coverage

Coherence

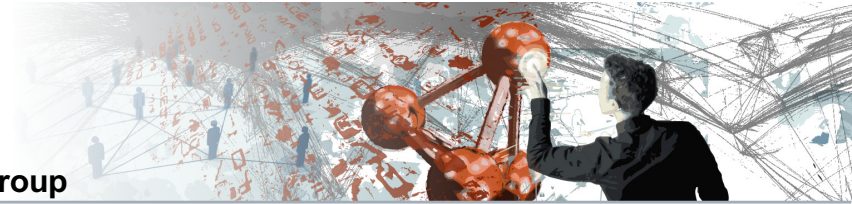
source <https://en.wikipedia.org/wiki/Z%C3%BCrich>



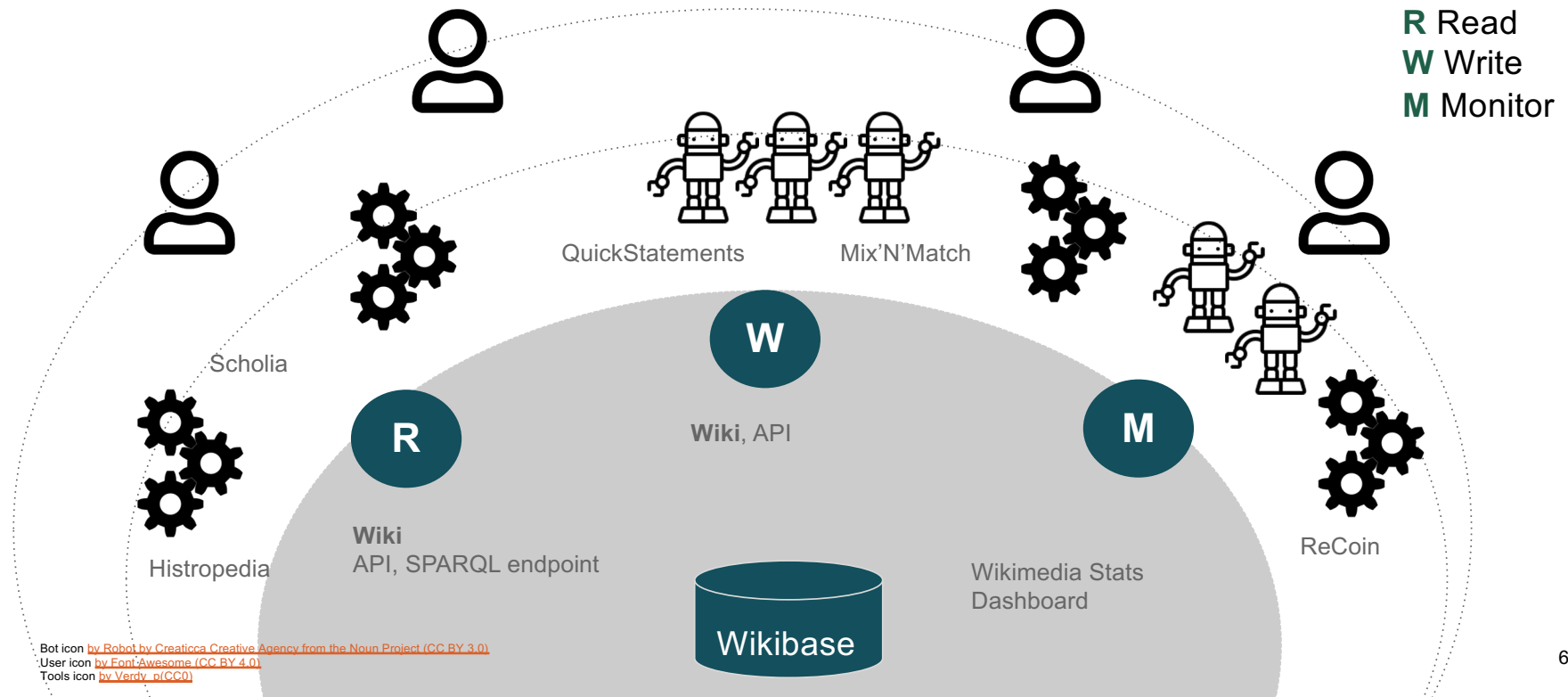
## Solution: Centralized Structured Data



P1705 label  
P31 instance of  
P190 sister city

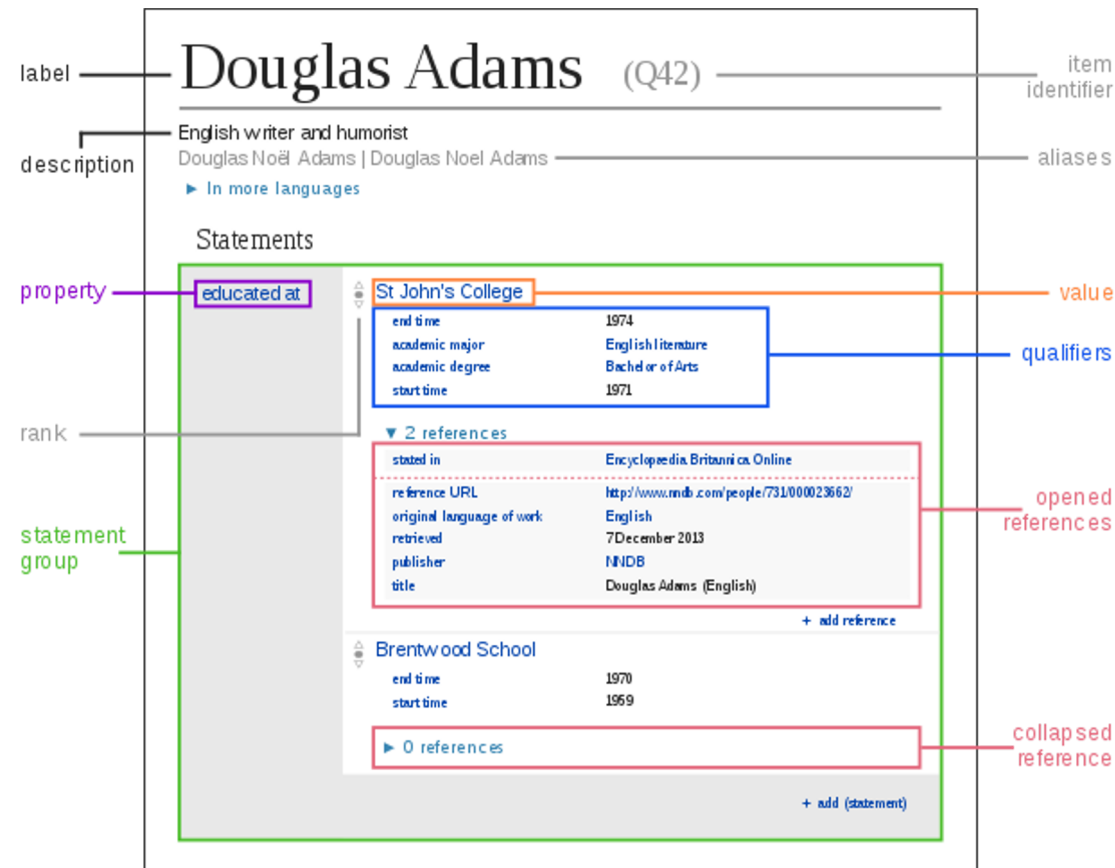


## Wikidata Ecosystem





## Data Model




source: [https://www.wikidata.org/wiki/Help:Statements#/media/File:Datamodel\\_in\\_Wikidata.svg](https://www.wikidata.org/wiki/Help:Statements#/media/File:Datamodel_in_Wikidata.svg)





## Wiki to Browse and Edit



WIKIDATA

- Main page
- Community portal
- Project chat
- Create a new item
- Recent changes
- Random item
- Query Service
- Nearby
- Help
- Donate

Tools

- What links here
- Related changes
- Special pages
- Permanent link
- Page information
- Concept URI
- Cite this page

Item [Discussion](#) [Read](#) [View history](#) [via](#)

### Zurich (Q72)






capital of the canton of Zürich, Switzerland [edit](#)  
City of Zurich | Zurich | Zürich ZH

[In more languages](#) [Configure](#)

Language	Label	Description	Also known as
English	Zurich	capital of the canton of Zürich, Switzerland	City of Zurich Zurich Zürich ZH
German	Zürich	Hauptstadt des Kantons Zürich, Schweiz	
Swiss German	Züri	Hauptschtadt vom Kanton Züri, Schwiiz	
French	Zurich	ville de la Suisse et chef-lieu du canton de Zurich	Zürich Zuerich

[All entered languages](#)

### Statements

instance of	<div><div></div>city</div> <div><a href="#">edit</a></div> <div>1 reference</div>
	<div><div></div>capital</div> <div><a href="#">edit</a></div> <div>1 reference</div>
	<div><div></div>cantonal capital of Switzerland</div> <div><a href="#">edit</a></div> <div>1 reference</div>
	<div><div></div>college town</div> <div><a href="#">edit</a></div> <div>1 reference</div>
	<div><div></div>municipality of Switzerland</div> <div><a href="#">edit</a></div> <div></div>

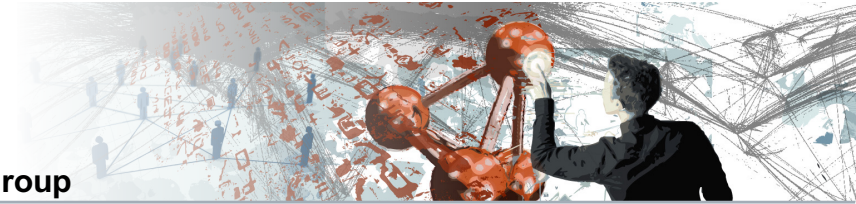
source: <https://www.wikidata.org/wiki/Q72>





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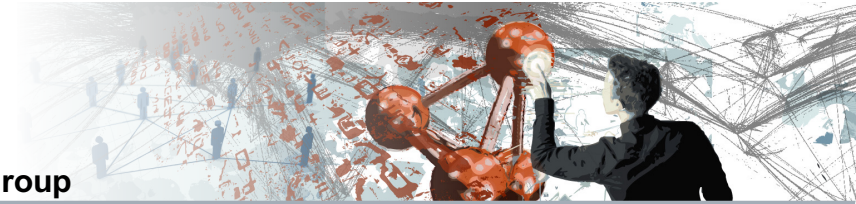


**Thank you for your attention!**



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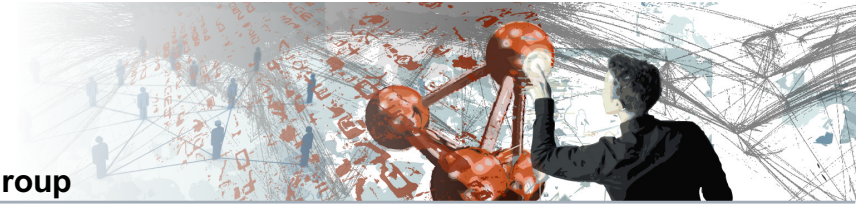


# Hands-on: Querying Wikidata with SPARQL



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# Wikidata Query Service

<https://query.wikidata.org/>