

Discovery

Novice Users

# Wikibase Cloud Usability Research (Q2-Q3 2024)

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- 1. Background**
- 2. User insights**
- 3. Product insights**
- 4. Opportunities**

# 01

# Background

# Strategic Context

Linked Open Data strategy

Wikibase makes it easier than ever before to create, connect, and grow a collaborative linked knowledge base.

WBC Product Strategy

A growing number of diverse open knowledge projects can comfortably make use of the Wikibase ecosystem

WBC Roadmap 2024

**We identify further opportunities to improve the novice user experience.**

We lack specifics about the new user experience that would guide improvements, and we haven't conducted usability testing to pinpoint challenges with using the product.

To identify the key areas for reducing barriers to using Wikibase, we must address open questions surrounding where new users face difficulties.



# Research Goals

- 1. Better understand the initial experience of a Novice user using Wikibase Cloud.**
- 2. Identify opportunities to increase usability.**

# Research Methods

## Interviews

# 9 Novice Participants

9/13 interviewees matched the desired criteria:

- Have started using WBC but are not quite experts
- Have some / limited experience with Wikidata
- Have a high level of interest in using WBC
- Are perhaps still in discovery mode

## Discussion

# Open-ended, discovery-driven

Background:

- Experience with Wikidata, project goal, role

Process:

- Current objective, workflow, frustrations
- → needs, pain points, ideas

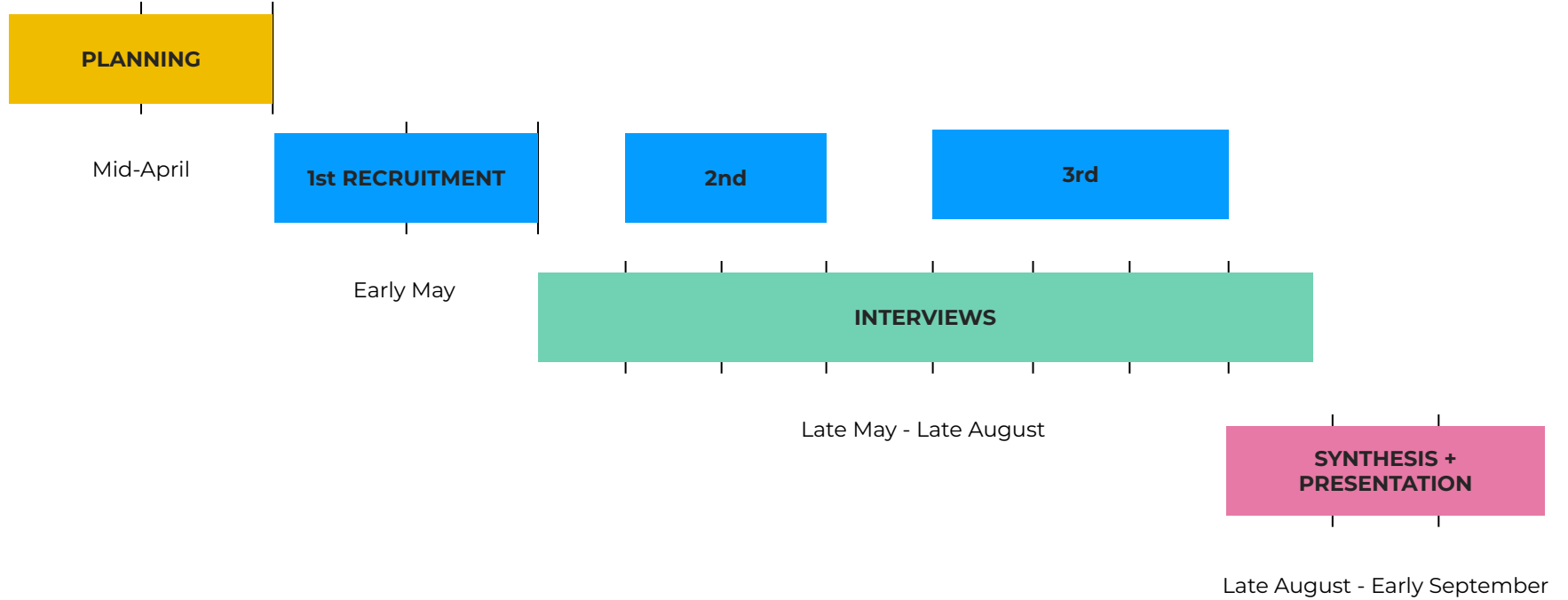
# Interview participants

## > 50% under-represented groups

- 3 non- cis-men
- 1+ neurodiverse participant\*
- 2 participants from outside of Europe/ North America

\*We didn't collect this information across all participants but one shared.

# Timeline



TOTAL: 20 WEEKS

# 02

# User Insights

**Novice users engage with WBC  
in 1 of 3 roles:** set-up admin,  
knowledge expert, sole contributor

# Set-up Admin / Wiki manager

## Facilitating a WBC instance for knowledge experts

### Background:

- Some experience with Wikibase/Wikidata/Wikimedia (WB/D/M).

### Tasks:

- Introduces WBC as a tool to the team
- Creates the instance and user accounts
- Facilitates the development of the data model and bulk imports
- Creates SPARQL queries for Knowledge Experts to use.

A screenshot of a web application interface. The top navigation bar is dark blue with a hamburger menu icon on the left, the word "Overview" in the center, and a gear icon and a magnifying glass icon on the right. The main content area has a white background. It contains two sections of text, each starting with a heading. The first section is titled "The concept store is a bit like wikipedia" and contains a paragraph followed by a bulleted list of three points. The second section is titled "The concept store is not like wikipedia" and contains a paragraph followed by a bulleted list of three points.

Overview

### The concept store is a bit like wikipedia

The concept store is similar to wikipedia, in that:

- It is a collaborative platform, where collective knowledge is built up over time by a community of users (like you!).
- The data can be queried and used in other applications, like our classifiers or the knowledge graph.
- It's built with [wikibase](#), which is the same software that powers [wikidata](#)! If you're familiar with wikidata, you'll probably find it easy to work with the concept store.

### The concept store is not like wikipedia

There are a few key differences between the concept store and wikipedia:

- **It's more focused:** Our concept store is specifically for *climate* concepts, rather than all human knowledge. We're not trying to build a model of the entire world.
- **It's more structured:** Like *wikidata*, we're interested in collecting *structured data* about our concepts, rather than free-text descriptions.
- **It's more connected:** We're very interested in the relationships between concepts, and how they can be used to build up a [knowledge graph](#). Without the relationships, we would still be able to build individual concept classifiers, but paying attention to how they're connected will allow us to *really* unlock its potential.

# Knowledge Expert

## Developing and populating a data model in WBC

### Background:

- Little to no experience with WB/D/M.

### Tasks:

- Learns about WBC and WB/D/M from the Set-up Admin.
- Works with the Admin to create a data model for their knowledge.
- Collaborates with other knowledge experts and existing taxonomies to develop and populate the data model
- Uses and adapts provided SPARQL queries



English Log in Request account

Item **Discussion** Read **View history** Search Climate Polic Q

## activities of intergovernmental organisations

(Q927)

No description defined

north atlantic treaty organization | nato | world trade organization | wto | organization for economic co-operation and development | oecd | african union | association of southeast asian nations | asean | organization of american states | gulf cooperation council | commonwealth | international criminal court

**In more languages**  
Configure

Language	Label	Description	Also known as
English	activities of intergovernmental organisations	No description defined	north atlantic treat... nato world trade organi... wto organization for ec... oecd african union association of sout... asean organization of am... gulf cooperation c... commonwealth international crimi...

Main page  
Recent changes  
Random page  
Help about MediaWiki

Tools

What links here  
Related changes  
Special pages  
Printable version  
Permanent link  
Page information  
Concept URI

Wikibase

New Item  
New Property  
New Schema  
All Properties  
Query Service  
Cradle  
QuickStatements

In other languages  
Add links

# Sole Contributor

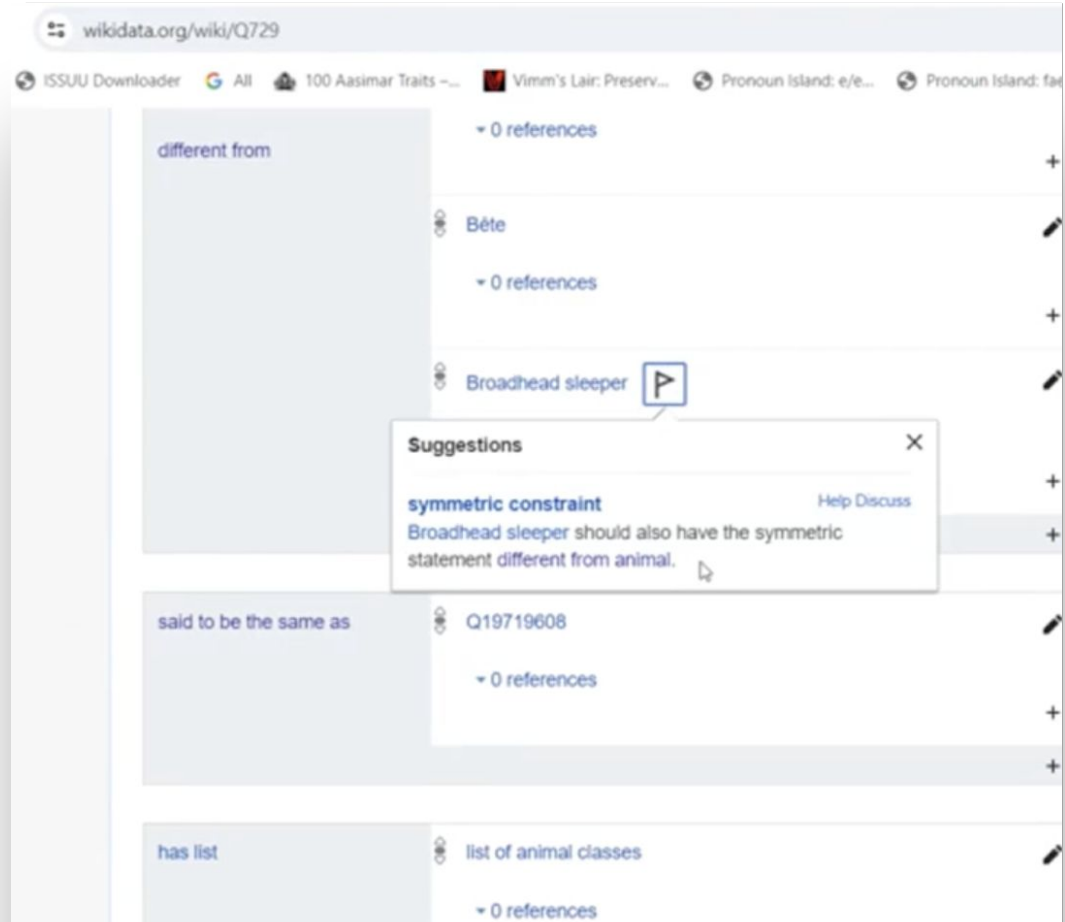
## Team of 1 within the broader WBC community

### Background:

- Has background knowledge about Wikidata that led to using WBC
- Creating an instance within a professionally-relevant context

### Tasks:

- “All of the above” aka creates, edits, imports, refines, queries
- Interfaces with other instance owners, instances, and other documentation
- Relies on expert WBC users for support
- Also sometimes: Community Moderator



The screenshot shows the Wikidata page for Q729. The page lists several properties and their values:

- different from**: 0 references
- Bête**: 0 references
- Broadhead sleeper**: 0 references
- said to be the same as**: Q19719608, 0 references
- has list**: list of animal classes, 0 references

A 'Suggestions' dialog box is open over the 'Broadhead sleeper' property, displaying the following text:

**Suggestions** [X]

**symmetric constraint** [Help Discuss]

Broadhead sleeper should also have the symmetric statement different from animal.

**03**

# **Product insights**

**Poor findability and usability negatively impact the usefulness of Wikibase Cloud for Novice users.**

# Findability

**When features or functionality are not easily findable, users are led to believe they don't exist.**

Across documentation, tools, features, and support, users struggled to understand whether something they needed existed.

For example:

- Several participants expressed that they wished they could create a custom/ consistent property display order. They had no idea that this was already possible and only learned when Anton (PM) alerted them and sent the relevant documentation.

“Wait, where am I?”

- Sole Contributor

# Usability

**Users often find that they can't make features or functionality work.** Because they are given little to no feedback, they struggle to know whether they need to do something differently or if something is broken. In both cases, whether the user needs legitimate support or the product is broken, sub-optimal user-friendliness impedes usefulness.

For example:

- One participant shared that they struggled to import references via QuickStatements. Without a sense of whether they were at fault or whether the tool was broken, they had no option but to move on without adding references.

**“But with some values, I just couldn't seem to make it work.”**

- Sole Contributor

5 areas were particularly challenging for Novice users:

**Bulk import,**  
**Data modeling,**  
**Querying,**  
**Data refinement and**  
**Support/ documentation**

# Bulk import



Most mentions of:

**“I’m not an advanced user”**

# Bulk import

- A. It's hard to figure out **which tool** to use **and how to use it**
  - i. Quick statements is easiest but even then, not that easy
  - ii. There's a clear division between "techy" and "non-techy" people when it comes to creating and using scripts.
- B. Sometimes the tool **just doesn't work**
  - i. QuickStatements was not importing certain properties, unclear why
  - ii. Actions API not working
  - iii. So move on. Or stay blocked (indefinitely).
- C. Sometimes you **can't import everything at once.**
  - i. But it's not clear where the limit is, nor that there was one to begin with
  - ii. Also takes forever
  - iii. Common work around: importing in bite-sized pieces

# Data modeling

**“They have to understand Wikidata first.** So we took them through the introduction of Wikidata structured data... And this is how I got them **to understand structure and linked open data and how they can benefit from Wikibases.”**

# Data modeling

- A. Creating **properties and data structures from scratch is challenging** and inefficient.
  - i. Knowledge Experts start by learning the Wikidata basics (“instance of”)
  - ii. Set-up Admins can facilitate developing an increasingly complex data model.
- B. **Wikidata is used as a short-cut** by providing a first reference point.
  - i. Set-up Admins / Sole contributors with WD experience get a head start with prior knowledge of standard properties / structures.
  - ii. Knowledge Experts learn to reference existing WD items.
- C. Users are **looking for supportive tools** to reduce all this mental load.
  - i. Namely, quality constraints
  - ii. Teams also often create explanatory tables = helpful to keep track within team / project

# Querying

“This again is a game changer ... **being able to visualize and interact with the structure of the graph** as a graph and **not just seeing a bunch of blue and purple links** on a static page.”

# Querying

- A. **Queries provide an intuitive visualization** that makes the data graph in the Wikibase Cloud instance accessible to the wider knowledge community.
  - i. Knowledge Experts and the larger audience of the Wikibase benefit from the intuitiveness and visualization of the graph
- B. But **creating queries is daunting**.
  - i. Knowledge Experts are dependent on more technical teammates / admin to create them
  - ii. Sole contributors and Admins cite that it's easier in WD (aka Querybuilder is so much better)
- C. Because **errors**, whether the tool is broken or simply hard to use, **are common**.
  - i. SPARQL seems to have limits on how much data it can query
  - ii. Deleted items sometimes still show up in queries
  - iii. Prefixes are particularly tricky

# Data refinement

“After a week of [figuring out import], we realized that we'd been missing some information and **we had to remove everything to do the import all over again, knowing that the removal process was almost just as long as the import process.**”

# Data refinement

A. **Mistakes in bulk import are costly.** Users are looking for help preventing them.

- i. Most common request: QualityConstraints
- ii. Checking to make sure bi-directional relationships are indeed bi-directional

B. However, **the trial and error workflow seems unavoidable.**

- i. Novice users are often learning how to data model and how to import simultaneously
- ii. Documentation and support are not sufficient to be able to get it right the first time.

C. Many users are interested in **making their WBC data model compatible with WD** data models and other taxonomies

- i. This is currently done manually and on an ad-hoc basis.
- ii. For many users, there is a large amount of overlap in notability, though they prefer the scope and control of a WBC instance.

# Support / documentation



**Wikibase Cloud-specific documentation** is particularly limited and hard to find.

# Support / Documentation

- A. There are notable differences between WBC, WD, and WBS. But the **documentation often fails to specify which product it pertains to.**
  - i. Ex. differences between tools like SPARQL, QuickStatements, etc.
  - ii. In general, it centers around WD and self-hosted Wikibases
- B. Novice users **depend on experts** in their network or the community in the absence of helpful documentation, though neither is ideal.
  - i. Documentation can be so hard / impossible to find that novices depend on experts.
  - ii. Telegram channel isn't easily searchable.
  - iii. People try googling.
- C. “As far as I know.” **Users commonly reference** what they perceive to be **their own ignorance or inability** to find the necessary information.
  - i. There is a culture set by experts that includes technical/ exclusionary language, which facilitates low-self esteem in Novice users.

# 04 Opportunities

**There is an opportunity to collaborate with Set-Up Admins to create standard beginner documentation for Knowledge Experts.**

There is an opportunity to collaborate with **Set-Up Admins** to create standard beginner documentation for **Knowledge Experts**. **Example: CPR concept store documentation**

**There is an opportunity to add supportive structures to hard-to-use tools to increase usability for Sole Contributors and Knowledge Experts.**

There is an opportunity to add supportive structures to hard-to-use tools to increase usability for Sole Contributors and Knowledge Experts. **Example: sample queries, adding extensions like QualityConstraints**

**There is an opportunity to focus community resources and support around Bulk Import, Data Modeling, and Querying for all novice users.**

There is an opportunity to focus community resources and support around Bulk Import, Data Modeling, and Querying for **all novice users**. Example:

**Wikibase Cloud Data Modeling Days**

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- + Shoutouts!**

+

# Shoutouts!

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I think it's like one of the most uplifting enterprises that humanity is engaged in at the moment, so thank you for everything you do.

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It is amazing. We are so, so grateful for the work that everybody has done to even make this available

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It is a really, really useful service and ... has been incredibly valuable.

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# Thanks!

**And a special thank you to the users who shared their experiences with us. We're so grateful for your generosity.**

- Annie Kim, UX Researcher