

Call for Software Contributions

*Please note that asterisks indicate that formfield is required to be filled out.

1. Project Title*:

Rust infrastructure for the Wikidata REST API

2. Name of the applying organization/entity*:

Wikimedia Sverige

3. Name of contact person*:

André Costa

4. E-Mail Address Of Contact Person*:

andre.costa@wikimedia.se

5. Project Description*:

Describe Your Project Idea In Detail, including its objectives, scope, and intended impact.///max.150words///

The project aims to make it much easier for Rust developers to use the REST API by writing and publishing a Rust crate (i.e. library) for it. Rust is an increasingly popular language for developers interacting with Wikidata (an incomplete list of tools here: <https://w.wiki/9pPk>) and this bit of infrastructure would help the uptake of the new API.

Secondly the project aims to port an existing tool, Cradle ([https://w.wiki/M\\$r](https://w.wiki/M$r)) to Rust, making use of the new crate and thereby the REST API. As Cradle is bundled with Wikibase in the wikibase.cloud service, the porting is an opportunity to rebuild parts of the tool so that it better supports Wikibases beyond Wikidata (requested at e.g. T317109). This is a valuable tool for WMSE's experimental Metabase platform (<https://metabase.wikibase.cloud>), a knowledge base in line with Recommendation7 (<https://w.wiki/9p3P>).

6. Wikidata REST API Integration*:

Describe how the project will utilise the Wikidata REST API. If possible, explain the specific functionalities or features that will be developed using the REST API. ///max.150 words///

The Wikibase REST API Rust wrapper crate will abstract the API interaction for retrieving and writing data from/to a Wikibase installation, making it easy for a Rust developer to

implement interactions with the wiki. This will utilise existing Rust crates to minimise the technical debt of maintenance and reduce code duplication.

The new Cradle implementation will utilise the above crate to allow form-based creation of standardised Wikibase items, specific for the individual Wikibase subject domain. Initially, this will include item creation and label/description/property type retrieval, but may extend as Cradle functionality is added (e.g. editing of existing items).

7. Team Composition*:

List the already known members of the project team and the intended roles for the project

Magnus Manske – Lead developer

Christina Sampazioti – Testing, documentation, and community liaison

Alicia Fagerving – Testing and documentation

André Costa – Project manager

8. Diversity and Inclusion (optional):

Explain how the project will engage underrepresented communities in Wikimedia Movement.

Cradle lowers the technical requirements for contributors to Wikibase instances. By ensuring it works well also beyond Wikidata, and on Wikibase.cloud in particular we lower the threshold for non-technical users to also contribute their knowledge to the linked data ecosystem.

Wikibase.cloud serves many projects working in the area of diversity and inclusion, e.g. <https://snarc-llgc.wikibase.cloud/> and <https://beyond-notability.wikibase.cloud/> the latter of which encountered problems using Cradle (T317173).

9. Project Plan*:

Provide a rough, high level project plan outlining key milestones, timelines, and deliverables. If possible at this point, describe them methodology or approach that will be used to develop the project.///max.150 words///

Timeline

* [15 May – 30 June]: Development of a first release of the Wikidata REST API crate

* [1 July – 31 August]: Porting of Cradle to Rust and the REST API. First release.

* [1 September – 15 October]: Testing of the new Cradle tool on Wikidata and continued refining of the tool.

* [15 October – 15 November]: Testing of the new Cradle tool on wikibase.cloud and final refining of the tool. [This may require collaboration with the wikibase.cloud team].

* [1 – 15 December]: Reporting and final documentation of changes to Cradle and on how to use the new crate.

Deliverables:

- * A published Rust crate for interacting with Wikibase using the REST API
- * A ported release of Cradle making use of the REST API
- * A new release of Wikibase.cloud using the new Cradle tool [dependant on wikibase.cloud team]

10. Budget Plan*:

Provide High Level Budget Plan, suggesting the total budget needed to develop your project proposal. Please include a rough breakdown of the project budget into personnel costs and material costs.

Personnel costs:

* MediaWiki consultancy:

** MM: 7 months at 50% FTE

** CS: 4 months @ 50% FTE

** = €36,000

* Wikimedia Sverige:

** AF: 4 months @ 20 % FTE

** AC: 7 months @ 5 % FTE

** = €5,500

We don't foresee the need for any material costs, but that depends a bit on the support WMDE can provide around a testing setup for wikibase.cloud

Total Budget: €41,500

Note that the mechanisms on how to organise the hire of the consultants have not been fully finalised. As this happens this may result in adjustments to the rough budget above. Adjustments can be made in consultation with WMDE, should you wish to move forward with financing the project.

11. Maintenance Requirements*:

Estimate the ongoing maintenance needs of the project and resources required for long-term sustainability. Address any potential challenges or risks related to maintenance.

- * Security updates in case of security vulnerabilities in the Rust crate or the Cradle tool, or their respective supply chain (other Rust crates).
- * Bug fixes and, as budget allows, feature requests, mostly for the Cradle tool.
- * Keeping the Rust crate in sync with the wikibase REST API capabilities and versions.
- * Keeping the deployed Cradle service for Wikidata in sync with Toolforge changes.

12. Additional Information (optional):

Space to include any supplementary materials or documents relevant to their project proposal.

A need which has been floated, but which we haven't landed on above, is whether to look at also changing the frontend of Cradle. Happy to have a discussion about whether you think this fits within the scope of the call.

A second avenue to explore would be to port additional tools, with a special focus on ones which have been requested for use in other wikibases. Work will continue with these tools if time allows after the work with the Rust crate and Cradle have been finalised.

An important outcome of the project is the continued and deepend discussions between Magnus Manske, one of the most prolific tool developers in the Wikimedia movement and the Content Partnerships Hub (https://meta.wikimedia.org/wiki/Content_Partnerships_Hub/Software), an initiative by Wikimedia Sverige. The discussions will centre on how we can work together to ensure long-term sustainability, maintenance and further development of the tools, as well as possible consolidation of some of them on one hand and the development of future tools on the other. Many of Magnus' tools are considered to be the most essential tools for the Wikimedia affiliates and volunteers working with Content Partnerships, see https://meta.wikimedia.org/wiki/Content_Partnerships_Hub/Software/Tool_prioritization_survey_end_2022.