

Library Data in Wikimedia Projects

Case Study from the Czech Republic

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Summary

The National Library of the Czech Republic started collaborating with Wikipedia in 2006 by linking its authority records to corresponding Wikipedia articles. In 2014, the National Library and Wikimedia Czech Republic began working together to educate librarians and library users. Joint projects on linked data and the use of authority records in Wikidata followed. For these projects, it proved important to have the National Library's databases licensed under CC0. This was eventually achieved and from 2022 the National Library is making most of its databases available as open data under a CC0 license. In 2023, the National Library and Wikimedia Czech Republic signed a memorandum of collaboration and the National Library officially launched its Wikimedians in Residence Program. This paper presents joint activities that benefit both organizations and especially their users and the multitude of ways in which people from the National Library and Wikimedia Czech Republic are involved in the efforts. It also identifies key factors which have contributed to the fruitful long-term collaboration. Desk research and an online survey were used as methods to identify the milestones in the aforementioned joint activities, the success factors and the types of involvement on both sides.

Zusammenfassung

Die Nationalbibliothek der Tschechischen Republik begann 2006 mit der Zusammenarbeit mit Wikipedia, indem sie ihre Normdatensätze mit den entsprechenden Wikipedia-Artikeln verknüpfte. 2014 begannen die Nationalbibliothek und Wikimedia Tschechien mit der Zusammenarbeit bei der Schulung von Bibliothekar*innen sowie Bibliotheksbenutzer*innen. Es folgten gemeinsame Projekte zu verknüpften Daten und der Verwendung von Normdatensätzen in Wikidata. Für diese Projekte erwies es sich als wichtig, die Datenbanken der Nationalbibliothek unter CC0 zu lizenzieren. Dies wurde schließlich erreicht, und ab 2022 stellt die Nationalbibliothek die meisten ihrer Datenbanken als offene Daten unter CC0-Lizenz zur Verfügung. Im Jahre 2023 unterzeichneten die Nationalbibliothek und Wikimedia Tschechien ein Memorandum zur Zusammenarbeit, und die Nationalbibliothek startete offiziell ihr „Wikimedians in Residence-Programm“. Dieses Dokument stellt gemeinsame Aktivitäten vor, von denen beide Organisationen und insbesondere ihre Benutzer*innen profitieren, sowie die vielfältigen Möglichkeiten, wie Mitarbeiter*innen der Nationalbibliothek und von Wikimedia Tschechische Republik in das Programm eingebunden sind. Außerdem werden Schlüsselfaktoren identifiziert, die zu der fruchtbaren langfristigen Zusammenarbeit beigetragen haben. Um die Meilensteine der genannten gemeinsamen Aktivitäten, die Erfolgsfaktoren und die Formen des Engagements beider Seiten zu identifizieren, wurden Desk Research und eine Online-Befragung eingesetzt.

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1. Introduction

In a digital age where libraries and cultural institutions around the world are increasingly focused on online accessibility and sharing of their collections, collaboration between libraries and Wikimedia projects is becoming essential. Whereas not all internet users actively search in library catalogues, for example, a significant number of them do visit Wikipedia.¹ Obviously, a library should have a presence where its (current and potential) users are.

The National Library of the Czech Republic has been actively collaborating with Wikipedia and other Wikimedia projects since 2006.

Wikimedia Foundation itself seeks to strongly support libraries and other GLAM² institutions when it comes to their successful entry into Wikimedia projects.³ So does the International Federation of Library Associations and Institutions (IFLA), emphasizing sharing information and knowledge as the common goal for Wikimedia projects and libraries,⁴ or the Association of Research Libraries⁵. In 2019 an inaugural meeting focusing on Wikidata and Wikibase for national libraries took place in Stockholm.⁶

- 1 List of most-visited websites, in: Wikipedia, 20.09.2024, https://en.wikipedia.org/wiki/List_of_most-visited_websites, last accessed: 07.10.2024.
- 2 GLAM stands for Galleries, Libraries, Archives, and Museums and is often used to signify cultural or heritage institutions in general.
- 3 GLAM Wiki, <https://outreach.wikimedia.org/wiki/GLAM>, last accessed: 15.07.2024. See also: Wikipedia:GLAM/Projects, in: Wikipedia, 26.02.2024, <https://en.wikipedia.org/w/index.php?title=Wikipedia:GLAM/Projects&oldid=1210476470>, last accessed: 15.07.2024. See also: Stinson, Alexander D; Wyatt, Liam; Fauconnier, Sandra: Stepping Beyond Libraries. The Changing Orientation in Global GLAM-Wiki, in: J LIS (3), 2018, <https://doi.org/10.4403/jlis.it-12480>.
- 4 IFLA signs the WikiLibrary Manifesto, IFLA, 15.06.2021, <https://www.ifla.org/news/ifla-signs-the-wikilibrary-manifesto/>, last accessed: 15.07.2024.
- 5 ARL White Paper on Wikidata: Opportunities and Recommendations, 18.04.2019, <https://www.arl.org/wp-content/uploads/2019/04/2019.04.18-ARL-white-paper-on-Wikidata.pdf>, last accessed: 07.10.2024.
- 6 Byrne, Wendy; Wyatt, Liam: Wikidata & Wikibase for National Libraries. The inaugural meeting, in: Europeana PRO, <https://pro.europeana.eu/post/wikidata-wikibase-for-national-libraries-the-inaugural-meeting>, last accessed: 10.04.2024.

For a number of national libraries, e.g., for the Library of Congress⁷, the German National Library,⁸ the Swiss National Library,⁹ the National Library of Finland,¹⁰ the National Library of the Netherlands¹¹, the National Library of Latvia,¹² the National Library of Israel¹³ or the State Library of New South Wales,¹⁴ it is clear that collaborating with Wikimedia projects is a path forward. These projects have a wider appeal in information and educational institutions, as projects in Italy¹⁵ or in Scotland¹⁶ apparently indicate. A collaboration between the Metropolitan Museum of Art and Wikimedia Foundation provides a great example from the museum field.¹⁷

At the same time, the library field seems to be more aware of the fact that in order to remain relevant in the digital era it is inevitable to change the current cataloging practices¹⁸ and switch to linked data. In this regard, Wikibase, which powers Wikidata,¹⁹ becomes one of the most visible tools to experiment with. Therefore, the collaboration does not focus solely on sharing data but also on tools to actually create and share them.

- 7 Ferriter, Meghan: Integrating Wikidata at the Library of Congress, The Signal, Digital Happenings at the Library of Congress, 22.05.2019, <https://blogs.loc.gov/thesignal/2019/05/integrating-wikidata-at-the-library-of-congress/>, last accessed: 15.07.2024.
- 8 «GND meets Wikibase», Eine Kooperation, in: Deutsche Nationalbibliothek - Wiki, <https://wiki.dnb.de/pages/view/page.action?pageId=147754828>, last accessed: 15.07.2024. See also: MiniCon - Wikibase – Dokumentation. The Wikidata and Wikibase Library Community, in: Deutsche Nationalbibliothek - Wiki, <https://wiki.dnb.de/display/GNDCON/MiniCon+-+Wikibase+-+Dokumentation+-+The+Wikidata+and+Wikibase+Library+Community>, last accessed: 15.07.2024.
- 9 Sonnekalb, Kerstin: Swiss National Library creates digital collection of Wikipedia-articles, Diff, 08.08.2023, <https://diff.wikimedia.org/2023/08/08/swiss-national-library-creates-digital-collection-of-wikipedia-articles/>, last accessed: 15.07.2024.
- 10 Wikidata:Events/WMFI Europeana wikidata workshop, in: Wikidata, https://www.wikidata.org/wiki/Wikidata:Events/WMFI_Europeana_wikidata_workshop, last accessed: 15.07.2024.
- 11 Janssen, Olaf: Reuse indicators for KB images in Wikipedia and Wikimedia Commons, the 2023 update, Zenodo, 24.01.2024, <https://doi.org/10.5281/zenodo.10561249>.
- 12 Skvireckis, Eduards: Library data on Wikidata. A case study of National Library of Latvia, in: SWIB22: Semantic Web in Libraries, 2022, https://swib.org/swib22/slides/skvireckis_swib2022_Library-data-on-Wikidata_draft.pdf, last accessed: 15.07.2024.
- 13 Frank, Andre: Wikimedia Israel's Enduring Partnership with the National Library of Israel, Diff, 17.01.2024, <https://diff.wikimedia.org/2024/01/17/wikimedia-israels-enduring-partnership-with-the-national-library-of-israel/>, last accessed: 15.07.2024.
- 14 Barker, Jeff. Wikipedia and Library Collections, in: VALA: Libraries / Technology and the Future //, 2020, <https://www.vala.org.au/vala2020-proceedings/vala2020-session-10-barker/>, last accessed: 15.07.2024.
- 15 Pellizzari Di San Girolamo, Camillo Carlo: Reconciliation of SBN authority records with Wikidata. Progresses and perspectives after a decade of work (2013-2023), in: JLIS.it 15 (1), 15.01.2024, S. 33–44, <https://doi.org/10.36253/jlis.it-573>. See also: Pellizzari Di San Girolamo, Camillo Carlo: Storia della collaborazione tra Wikidata e le biblioteche della Rete URBE nel controllo di autorità, in: Danieli, Silvano (Hg.): Parsifal: Un modello di collaborazione bibliotecaria per condividere la conoscenza registrata, S. 147–162. Biblioteche & bibliotecari / Libraries & librarians, Bd. 10, <https://doi.org/10.36253/979-12-215-0356-2.17>.
- 16 Wikimedian in Residence, The University of Edinburgh, 21.02.2023, <https://www.ed.ac.uk/information-services/help-consultancy/is-skills/wikimedia>, last accessed: 15.07.2024.
- 17 Tallon, Loïc. Wikimedia and The Met: A shared digital vision, Wikimedia Foundation, 19.04.2018, <https://wikimediafoundation.org/news/2018/04/19/wikimedia-the-met-shared-digital-vision/>, last accessed: 15.07.2024.
- 18 Alemu, Getaneh: The future of enriched, linked, open and filtered metadata. Making sense of IFLA, RDA, Linked Data and BIBFRAME, London 2022.
- 19 Lemus-Rojas, Mairelys; Pintscher, Lydia: Wikidata and Libraries. Facilitating Open Knowledge, ScholarWorks Indianapolis, 03.07.2017. <https://hdl.handle.net/1805/16690>.

For all these reasons we believe that sharing experience from the National Library of the Czech Republic can be beneficial for librarians from other institutions which have either already chosen the same path, or which are yet to potentially make such a decision.

In particular, this paper²⁰ seeks to provide answers to the following three research questions:

- Which milestones in the history of collaboration between the National Library and Wikimedia projects can be identified?
- Which factors have played a key role in the collaboration?
- How exactly are people from Wikimedia Czech Republic and the National Library's employees involved?

2. Methods

In order to find answers to the above mentioned research questions, two research methods were employed – desk research and an online survey.

Desk research conducted in May 2024 involved a thorough investigation of three basic sets of materials – the National Library's official lists entitled Publications/Slides on Opening Data at the National Library of the Czech Republic²¹ (hyperlinked from the National Library's open data webpage²²) and Publications/Slides on Activities by Wikimedians in Residence at the National Library of the Czech Republic²³ and annual reports by Wikimedia Czech Republic²⁴. While the first set covered the period from 2018 to 2023 and the second one only started in 2023, the third one went back to 2013 and included a 2022 annual report as its newest added item.

Approximately 35 % of items from the first two sets consisted of multiple documents (e.g., slides and a video recording from a particular event). For the sake of simplicity, these items were treated as a single item (a document cluster).

Overall, 52 items were analyzed and indexed using up to two keywords. While three items (Wikimedia Czech Republic's annual reports presenting its activities from 2013, 2014 and 2018) did not include anything related to the collaboration with the National Library, all 49 remaining items were found to be relevant for further processing. Seven items were indexed using two keywords; one keyword was assigned to each of the remaining 42 items.

20 The paper is based on a lecture by the authors delivered at BiblioCon 2024 in Hamburg, Germany, on 6 June 2024. Slides: <https://nbn-resolving.org/urn:nbn:de:0290-opus4-190239>.

21 Publikace/prezentace o otevírání dat v Národní knihovně ČR / Publications/Slides on opening data at the National Library of the Czech Republic, Google Docs, <https://docs.google.com/document/d/1n80p9WnKOG-xOfJt5Xh3ZHVL5OXHpTw57M7UWIJbmDc/edit?usp=sharing>, last accessed: 15.07.2024.

22 Open Data, in: National Library of the Czech Republic, 10.07.2024, <https://www.en.nkp.cz/about-us/professional-activities/open-data>, last accessed: 15.07.2024.

23 Publikace/prezentace o wiki-rezidentství v Národní knihovně ČR, Google Docs, https://docs.google.com/document/d/1LHqW-CsCA_0rn5aCQFgxX_KTMOzOeojR_7e4mPYHyHE/edit?usp=sharing, last accessed: 15.07.2024.

24 Category:Wikimedia Czech Republic annual reports - Wikimedia Commons, https://commons.wikimedia.org/wiki/Category:Wikimedia_Czech_Republic_annual_reports, last accessed: 15.07.2024.

Also in May 2024 (from 13 to 31 May) we conducted an online survey in which we asked 26 potential respondents (people who have been or were involved in the collaboration between the National Library and Wikimedia projects) to share their views and provide more information about their own involvement in the collaboration. Overall, we received 15 responses and so achieved approx. 58 % response rate. Eight respondents identified themselves as the National Library's employees, five as Wikimedia Czech Republic's employees, four as members of Wikimedia Czech Republic and two respondents also added other roles: a trainer in the Seniors Write Wikipedia Program and a Wikimedian in Residence at another institution (four respondents out of the 15 indicated two roles in their answers).

Google Forms were used as a tool to prepare and run the survey. The survey itself consisted of twelve questions.

The full list of questions (translated from Czech to English) is available below:

1. Email
2. What do you consider the key prerequisites for a successful collaboration between the National Library of the Czech Republic and Wikimedia projects?
3. How would you describe your role in the collaboration between the National Library of the Czech Republic and Wikimedia projects?
4. Can you detail which activities you primarily focus on?
5. Which major benefits from this collaboration can you identify?
6. In which directions could this collaboration further develop in the future?
7. First name
8. Surname
9. I am [a member of Wikimedia Czech Republic, an employee of Wikimedia Czech Republic, an employee of the National Library of the Czech Republic, Other]
10. The collaboration between the National Library of the Czech Republic and Wikimedia project is something [I am currently involved in, I was involved in in the past].
11. Please specify when the collaboration took place.
12. Your comments

Ten questions were open ones and two were closed ones (question 9 was a multiple choice question and question 10 a single choice question). Looking at the survey from another point of view, seven questions focused on the primary topic (2 to 6, 10 to 11), three (1, 7 and 8) asked for contact information, one question (9) for a demographic characteristic and the last one (12) could be used to provide additional comments. Only four questions (1, 9, 10 and 11) were marked as required, the remaining eight were optional.

3. Results

3.1 Which milestones in the history of collaboration between the National Library and Wikimedia projects can be identified?

Based on keyword indexing applied to the three selected data sets, eight main areas of interest in which the National Library collaborates with Wikimedia projects were identified. These are shown in Table 1 which also details the first year when the National Library and Wikimedia Czech Republic started to collaborate in each particular area of interest.

Table 1: Areas of interest identified in desk research

Area of interest	Number of documents	Beginnings of collaboration
Linking Wikipedia articles to the Union Catalog	1	2006
Training librarians	4	2014
Implementing the National Library's first linked data project	8	2018
Promoting Wikimedia projects at a conference for librarians, archivists and museum workers	3	2018
Getting authority data ready for imports to Wikidata	16	2019
Publishing the first open data sets	15	2022
Signing a memorandum of collaboration	3	2023
Launching the Wikimedians in Residence Program	4	2023

The data clearly shows that most of the activities were carried out from 2018 onwards, with most attention being paid to processing and presenting authority data and publishing and using the National Library's open data in general. These represent nearly 60 % of all items that have been studied.

More details on each of the aforementioned areas of collaboration are included below.

Linking Wikipedia articles to the Union Catalog

The beginnings of the National Library's collaboration with Wikimedia projects can be traced back to 2006. During this year first links to the Union Catalog operated by the National Library started to appear in Czech Wikipedia's articles, using identifiers from authority records to achieve the desired level of precision. Several hundred links were added to the articles in the first year of the collaboration

alone.²⁵ This project was led by Zdenek Bartl, representing the National Library and its National Name Authorities Department, and Petr Kadlec, one of Czech Wikipedia's administrators who still serves in this role.²⁶ It was inspired by a similar endeavor by the Deutsche Nationalbibliothek focusing on the German Wikipedia.²⁷

Training librarians

In April 2014 the first bilateral meeting regarding the new project Senior Citizens Write Wikipedia took place.²⁸ In 2015 the first training courses for librarians which were held in the National Library followed.²⁹ These courses soon started taking place in a variety of other libraries across the country.

Some of the events such as seminars/webinars or workshops are jointly organized by Wikimedia Czech Republic, the National Library and the Association of Library and Information Professionals of the Czech Republic (of which the National Library is an active institutional member), with Wikimedians being invited to take part along with the librarians. In September 2022, the GLAM Project Coordinators' Meeting With Czech Librarians was held in the National Library.³⁰

In some cases, indirect training is involved, e.g., in spring 2023, a photo contest focusing on library buildings was launched. Librarians and Wikimedians from across the country uploaded (or learned to upload first) photos of library buildings to Wikimedia Commons.³¹ Later, they could participate in a follow-up online workshop.³²

Implementing the National Library's first linked data project

In 2018, a pilot project to make the Czech Terminology Database of Library and Information Science available as linked data was carried out. A new Wikidata property TDKIV term ID³³ was added

- 25 Bartl, Zdeněk: Authority a Wikipedie našly společnou řeč, *Ikaros*, 2006,10 (11), <https://ikaros.cz/authority-a-wikipedia-nasly-spolecnou-rec>, last accessed: 15.07.2024. In early October 2024, over 21,000 Wikipedia articles contained the template {{NK ČR}} used for the linking (Template transclusion count, in: *Jarry1250's Tools*, 22.04.2024, https://templatecount.toolforge.org/index.php?lang=cs&name=NK_%C4%8CR&namespace=10#bottom, last accessed 07.10.2024.). An archival version of the article on Karel Čapek, one of the most famous Czech writers of all time, can serve as an example. (Karel Čapek, in: *Wikipedie*, 27.06.2006, https://cs.wikipedia.org/w/index.php?title=Karel_%C4%8Capek&oldid=584912, last accessed: 15.07.2024.)
- 26 Seznam všech uživatelů, in: *Wikipedie*, <https://cs.wikipedia.org/wiki/Speci%C3%A1ln%C3%AD:U%C5%BEivatel%C3%A9/syso>, last accessed: 15.07.2024.
- 27 Voss, Jakob. *Wikipedia als Teil einer freien bibliothekarischen Informationsinfrastruktur*, in: Lülfing, Daniela; Benkert, Hannelore; Siebert, Stefan (Hg.): 95. Deutscher Bibliothekartag in Dresden 2006: Netzwerk Bibliothek, Frankfurt am Main 2007 (Zeitschrift für Bibliothekswesen und Bibliographie. Sonderbände), S. 63–74.
- 28 *Wikipedie:Senioři píší Wikipedii/Časová osa*, in: *Wikipedie*, 19.05.2024, https://cs.wikipedia.org/w/index.php?title=Wikipedie:Senio%C5%99i_p%C3%AD%C5%A1%C3%AD_Wikipedii/%C4%8Casov%C3%A1_osa&oldid=23937997, last accessed: 15.07.2024.
- 29 *File:WM CZ - Annual report 2015.pdf*, 06.06.2016, S. 4, https://commons.wikimedia.org/w/index.php?title=File%3AWM_CZ_-_Annual_report_2015.pdf&page=4, last accessed: 15.07.2024.
- 30 *Setkání koordinátorů projektu GLAM s českými knihovníky*, in: *Svaz knihovníků a informačních pracovníků ČR*, <https://www.skipcr.cz/knihovnicke-akce/setkani-koordinatoru-projektu-glam-s-ceskymi-knihovniky>, last accessed: 15.07.2024.
- 31 *Category: Fotíme knihovny*, in: *Wikimedia Commons*, https://commons.wikimedia.org/wiki/Category:Fot%C3%A1me_knihovny, last accessed: 15.07.2024.
- 32 *Popíšme fotografie knihoven*, in: *Svaz knihovníků a informačních pracovníků ČR*, <https://www.skipcr.cz/knihovnicke-akce/popisme-fotografie-knihoven>, last accessed: 15.07.2024.
- 33 *TDKIV term ID*, <https://www.wikidata.org/wiki/Property:P5398>, last accessed: 15.07.2024.

to Wikidata to make sure links to individual records from the database can be inserted into either existing, or newly created Wikidata items. This pilot project resulted in the terminology database identifiers being added to Wikidata and in using Hub³⁴ to provide reciprocal links from the terminology database to Wikidata items.³⁵ Lessons learned were shared through the guidelines developed during the project.³⁶

Promoting Wikimedia projects at a conference for librarians, archivists and museum workers

2018 also marks the first year in which a speaker from Wikimedia Czech Republic participated in the Archives, Libraries, Museums in the Digital World, a conference series currently organized by the Association of Library and Information Professionals of the Czech Republic, the National Library and other partner institutions, especially the National Archives. Vojtěch Dostál delivered a lecture about Wikidata as a metadatabase for cultural institutions.³⁷ Also in 2018, Linda Jansová prepared a presentation entitled A Pilot Project to Publish the TDKIV Terminology Database as Linked Data.³⁸ In the following years, more topics from the linked open data realm and Wikimedia world were covered by speakers representing Wikimedia Czech Republic or the National Library.

Getting authority data ready for imports to Wikidata

In 2019, a project entitled Making the National Name Authority Database Available as Linked Data was carried out by the National Library which closely collaborated with Wikimedia Czech Republic, especially with Vojtěch Dostál and Jiří Sedláček. A Wikibase instance was set up to present a significant volume of data from the Czech name authority records as linked open data available under CC0.³⁹ This Wikibase instance served as a source of data for Wikidata imports. Follow-up activities in 2020 focused on adding data from newly created authority records to Wikidata and also on creating tools to enable semi-automated data synchronization between the national authority file and Wikidata.

In 2020, Petr Kadlec developed NKlink, a tool that enables databases which add the national authority identifiers to their records to pull related data (such as additional identifiers) from Wikidata.⁴⁰ This

34 Hub, <https://hub.toolforge.org>, last accessed: 15.07.2024.

35 Also, attempts were made to start working with a more granular and precise data structure in the database, with some of the more precise relationships between items being inserted into Wikidata.

36 Jansová, Linda: Metodika pro zpřesňování vztahů mezi hesly v databázi TDKIV a zpřístupňování údajů v systému Wikidata. Výstup z Pilotního projektu zpřístupnění TDKIV v podobě propojených dat, 2018, https://tdkiv.nkp.cz/docs/metodika_propojena_data_verze_1_0, last accessed: 15.07.2024.

37 Dostál, Vojtěch: Wikidata jako metadatabáze pro kulturní instituce, 2018, <https://bulletin.skipcr.cz/prezentace/archivy-2018/Dostal.pdf>, last accessed: 15.07.2024.

38 Jansová, Linda: Pilotní projekt zpřístupnění terminologické báze TDKIV v podobě propojených dat, <https://bulletin.skipcr.cz/prezentace/archivy-2018/Jansova.pdf>, last accessed: 15.07.2024.

39 Authority: Báze národních jmenných autorit v podobě propojených dat, https://authority.wikimedia.cz/auto/Hlavn%C3%AD_strana, last accessed: 15.07.2024.

40 Dostál, Vojtěch: NKlink. Nový nástroj propojující Wikidata se světem Národních autorit, Wikimedia ČR – blog, 12.10.2020, <https://blog.wikimedia.cz/2020/10/12/nklink-novy-nastroj-propojuji-wikidata-se-svetem-narodnich-autorit/>, last accessed: 15.07.2024. See also: NKlink, <https://nklink.toolforge.org/>, last accessed: 15.07.2024.

tool has most notably been implemented in the authority database operated by the National Library.⁴¹ It can also be seen in the discovery layer used by the National Library of Technology.⁴²

In November 2022, automated updates to Wikidata items which contain an ORCID and/or an ISNI identifier but not the National Library's authority identifier were introduced, using ORCID and ISNI identifiers manually added to authority records by librarians to match the appropriate Wikidata items.⁴³

In spite of all efforts, errors are sometimes encountered or introduced; procedures to report and subsequently correct the authority records and/or relevant Wikidata items are in place (e.g., using an email address or a webform available as a pop-up window in the National Library's authority database public interface⁴⁴). Librarians from the National Library but also from other Czech libraries⁴⁵ are especially active in providing this invaluable feedback, helping to make the data as accurate as possible.

The availability of a number of authority identifiers in Wikidata provided a prerequisite for enriching Wikidata with data from the Czech National Bibliography. In late August 2023, Vojtěch Dostál from Wikimedia Czech Republic added over 160,000 new items to Wikidata which were based on bibliographic records from the Czech National Bibliography.

The current list of items with Czech authority identifiers is available from the Wikidata Query Service.⁴⁶ The same applies to items with identifiers from the Czech National Bibliography.⁴⁷

Publishing the first open data sets

On 20 April 2022, the National Library announced the publication of the Czech National Bibliography, the National Authority File and the Directory of Libraries & Information Centers in the Czech Republic under CC0.⁴⁸ Later on, more databases followed. A complete list of the open data sets is available on the National Library's website.⁴⁹

41 AUT - Authority Database of the National Library of the Czech Republic, <https://aleph.nkp.cz/eng/aut>, last accessed: 15.07.2024.

42 NTK, VŠCHT Praha, ÚOCHB, <https://vufnd.techlib.cz/>, last accessed: 15.07.2024.

43 Dostál, Vojtěch: Na Databázi národních autorit spouštíme automatickou aktualizaci, svatý grál Wikidat, Wikimedia ČR - blog, 14.11.2022, <https://blog.wikimedia.cz/2022/11/14/na-databazi-narodnich-autorit-spoustime-automatickou-aktualizaci-svaty-gral-wikidat/>, last accessed: 15.07.2024.

44 See, for example, a record representing Karel Čapek (AUT - Úplné zobrazení záznamu: Čapek, Karel, 1890-1938, in: Base: AUT, https://aleph.nkp.cz/F/?func=direct&doc_number=000004031&local_base=AUT, last accessed: 15.07.2024.). In the Czech interface, a link entitled "Ohlásit chybu v záznamu" is available.

45 These include the Moravian Library in Brno or Olomouc Research Library.

46 [A List of Czech Authority Identifiers in Wikidata], in: Wikidata Query Service, 15.07.2024, <https://w.wiki/EEX>, last accessed: 15.07.2024.

47 [A List of Czech National Bibliography Identifiers in Wikidata], in: Wikidata Query Service, 15.07.2024, <https://w.wiki/A5Dx>, last accessed: 15.07.2024.

48 Prior to 2022, the data were made available via Open Archives Initiative – Protocol for Metadata Harvesting (OAI-PMH) and Z39.50 (and now still continue to be available via these protocols).

49 Open Data, 2024.

Without the multi-tiered collaboration with Wikimedia Czech Republic, e.g., the provision of invaluable resources on legal aspects of opening data⁵⁰ or networking and educational opportunities, it would probably take much longer to make these databases available under CCO.

Signing a memorandum of collaboration

On 9 June 2023, a memorandum of collaboration between the National Library and Wikimedia Czech Republic was signed by Tomáš Foltýn, Director General of the National Library, and Klára Joklová, Executive Director of Wikimedia Czech Republic. This symbolic act further emphasized how important it is for the two parties to work together to achieve common goals.⁵¹

Launching the Wikimedians in Residence Program

The summer of 2023 also saw another important milestone – a kick-off of the National Library's Wikimedians in Residence Program. It started with two librarians involved but soon attracted more interest, resulting in a team of five currently.

In the fall of 2023, the National Library, again in collaboration with Wikimedia Czech Republic and, on top of that, with The Wikipedia Library, started offering the country's active Wikimedians an opportunity to obtain free membership so that they can benefit from its vast electronic and physical holdings and readily use them as sources of reliable information.⁵²

3.2 Which factors have played a key role in the collaboration?

Answers to the second question in the survey served as a key input to provide an answer to the research question which factors have played a key role in the collaboration.

All fifteen respondents provided their answers to the aforementioned open question. These answers were translated to English and divided into six broad categories which constitute the major success factors. Sometimes the answers were rather complex and fell into more than one category. In these cases they were split into its constituent parts and then categorized. This process has resulted in identifying success factors included in Table 2.

Table 2: Success factors

Success factor	Number of answers in which this factor is mentioned
People	12
Shared interests and motivations	4

50 Wikidata:WikiProject Czech Republic/Pro instituce, in: Wikidata, 17.12.2023, <https://databaze.wikimedia.cz/>, last accessed: 15.07.2024.

51 The memorandum was signed in Klementinum in Prague, which is the official seat of the National Library, during the opening ceremony of the General Assembly of the newly established Wikimedia Europe (Schejbalova, Natalie: Prague hosted a Wikimedia Europe meeting, Diff, 16.06.2023, <https://diff.wikimedia.org/2023/06/16/prague-hosted-a-wiki-media-europe-meeting/>, last accessed: 15.07.2024.)

52 Wikipedie:Wikiknihovna, in: Wikipedie, 05.01.2024, <https://cs.wikipedia.org/w/index.php?title=Wikipedie:Wikiknihovna&oldid=23534663>, last accessed: 15.07.2024.

Success factor	Number of answers in which this factor is mentioned
Support from the management	3
Data	3
Legal framework	2
Wikimedians in Residence Program	2

It is fairly clear that people are the most valuable asset in both the National Library and in Wikimedia Czech Republic and the Wikimedia world in general. They are followed by other factors ranging from shared interests and motivation to the Wikimedians in Residence Program.

Quotations from the answers organized into the six categories or success factors are included below.

People

- People; without them (especially from the National Library but also from the Wikimedia projects) there would be no collaboration.
- People who like what they are doing and their ability to understand each other and reach an agreement.
- Actively involved people and the ability to collaborate.
- Both parties try to go beyond the traditional practice which in turn leads to other small-scale collaborations.
- Communication.
- Open communication and collaboration.
- Interest, willingness and finding enough time to collaborate.
- Active involvement of both parties.
- Continuous involvement of individual people (employees and community members).
- Expertise on both sides with overlaps between Wikimedia projects and the library worlds (learning from each other).
- Motivating people from the National Library to join the projects, become really involved in them and provide assistance in the projects along the way.
- Interest of the Wikimedia community which helps implement projects which would otherwise (solely with the employees involved) be difficult to implement.

Shared interests and motivations

- Sharing goals and the ability to join forces, knowledge and skills to achieve them.
- Searching for win-win moments in which both parties see benefits for themselves and are eager to collaborate.
- Thinking of each other and of ways in which we can enhance our collaboration.
- Being able to take actions to advance particular activities.

Support from the management

- Management support in both organizations which results in letting their employees dedicate some of their work time to the collaboration.

- Involvement from both parties which is also actively supported by the institution's management.
- The National Library's top management support for the employees involved in the collaboration.

Data

- The National Library's ability to keep providing its data and, on the Wikimedia side, the willingness to help share them in Wikimedia projects.
- The National Library's effort to be more open and share its trustworthy information in Wikimedia projects.
- The National Library's ability and willingness to adapt to the needs and standards of Wikimedia projects.

Legal framework

- Legal framework and the library founder's attitude.
- Complying with copyright legislation and license terms when sharing content.

Wikimedians in Residence Program

- The unique setup where a whole team of Wikimedians in Residence is involved in the collaboration, preventing the collapse of the collaboration in case the person involved leaves.
- Inner motivation (in case of Wikimedians in Residence).

The benefits of the collaboration include:

- continuous imports of authority data to Wikidata;
- making the key databases produced by the National Library available under the CC0;
- using Wikidata as a tool to enhance the library data and facilitate their reuse;
- editing Wikipedia, especially the library and information science articles (including articles related to the National Library itself), which in turn helps librarians because their patrons can find the desired piece of information right away;
- correcting errors found as a result of data linking both in Wikimedia projects and in the National Library's databases;
- adding new items to Wikidata and enriching the existing ones;
- more visibility for the National Library and its projects and resources;
- achieving better results by working together than by working on one's own;
- mutual learning (librarians gain insight into free culture, Wikimedians become acquainted with library resources and procedures);
- the ability to benefit from the support from the management, systematically work on the projects and enhance the multi-layered partnership.

3.3 How exactly are people from Wikimedia Czech Republic and the National Library's employees involved?

Answers to the questions 3 to 6 and 10 to 11 in the survey were used as source data for the research question regarding the involvement of people from Wikimedia Czech Republic and the National Library in the collaboration.

We identified seven clusters of types of involvement as can be seen in Table 3. In case of one respondent with a vast array of roles the response has been divided into five parts; therefore the second column reflects the number of responses in which a particular role was described (19) rather than the total number of responses (15).

Table 3: *Types of involvement in the collaboration*

Type of involvement	Number of responses
Advisor and liaison officer	4
Coordinator	4
PR role	4
Wikimedian in Residence	3
Training courses organizer	2
Developer	1
Authority data supervisor	1

Quotations from the answers organized into the seven clusters are included below.

Advisor and liaison officer

- Advisor.
- I consider my role as being primarily advisory and providing information technology expertise, with the main task to make connections between the parties and show opportunities.
- In the early days I initiated the collaboration, I was coming up with ideas and, together with the National Library's representatives, tried to find ways how to implement them. Later on I was a liaison officer and now I have moved into the advisory role. I am still involved in some topics as a community member (a volunteer), often without directly coordinating with the National Library.
- Being a useful intermediary because I am familiar with Wikidata and, at the same time, with being a systems librarian.

Coordinator

- I try to serve as a coordinator and also bring along new ideas from the current trends in the library field.
- Representing Wikimedia Czech Republic in terms of the Program for Partnership and educational activities; providing organizational support and guidance.

- Keeping abreast of the collaboration and being involved in the communication.
- Finding connections with our members (Wikimedia Czech Republic members and Wikimedia community at large).

PR role

- Promoting the National Library's offer of free membership for active Wikimedia editors.
- Collectively thinking of presenting our joint activities both nationally and internationally (PR, advocacy) at conferences, in professional literature etc.
- Presenting the results of our collaboration and arranging negotiations with the National Library's founder.
- Continuously engaging my colleagues from the National Library in our other activities, editing campaigns etc.

Wikimedian in Residence

- Wikimedian in Residence.
- I consider myself as being an assistant to the main Wikimedians in Residence who helps create, edit or amend Wikipedia articles from library and information science.
- As part of our reference service we often search for information and their resources, so it is especially adding verified information and citations to Wikipedia.

Training courses organizer

- Lifelong learning for librarians related to Wikimedia projects.
- Participating in learning opportunities (and extending these) for Wikimedians in Residence and librarians in general. Making connections and finding gaps to be filled.

Developer

- Currently I serve as an occasional developer of Wikidata-related projects and help automate things; sometimes also as a consultant.

Authority data supervisor

- I occasionally check the accuracy of links between our authority records (and also other identifiers) and Wikidata items; this is an integral part of keeping the authority records up-to-date.

All of the respondents are currently (in May 2024) actively involved in the collaboration, with one of them having been involved for a decade now (from 2014). The highest number of new members was witnessed in 2020 (three respondents) and 2023 (also three respondents). More details are provided in Table 4.

Table 4: First years of being involved in the collaboration

First year	Number of respondents
2014	1
2017	2
2019	1
2020	3
2021	1
2022	2
2023	3
2024	2

As to the directions in which the collaboration could further develop in the future, the following ideas have been presented:

- keep opening up the National Library's data so that they are available not only through the online catalogs;
- prepare more data from the Czech National Bibliography to be imported to Wikidata;
- develop procedures which would ultimately lead to a more systematic linking between the digital libraries and Wikipedia;
- update previously imported data where applicable;
- look for examples of real-life data reuse;
- create new applications for presenting the data in new contexts;
- keep promoting the collaboration so that other libraries (especially those which produce databases containing information about people from their respective region) also start contributing to Wikidata or develop other types of collaborations with Wikimedia projects such as running editatons;
- use Wikibase, a MediaWiki extension which powers the Wikidata, for some of the National Library's databases;
- further enhance the way we share updates among ourselves.

4. Discussion

The answer to the first research question, i.e., which milestones in the history of collaboration between the National Library and Wikimedia projects can be identified, indicates the crucial role of importing authority data to Wikidata and publishing open data sets as a necessary prerequisite for these imports. At the same time, getting authority data ready for the linked data environment is a first step in the process of making changes to the National Library's cataloging workflows in the future. Therefore, it is clear that collaboration with Wikimedia projects directly helps the National Library in its early stages of shifting from the traditional MARC cataloging to linked data. Let us note that although some of the activities can be described using "project" as an umbrella term, what mostly happens is that there are follow-up projects in place or activities which build upon the previous

outputs. Furthermore, the rising number of areas in which the collaboration has developed recently can serve as evidence of the ever-growing significance and breadth of the collaboration.

While the very first collaboration dates back to 2006 (four years after the Czech Wikipedia was founded), the year 2018 when the National Library started to collaborate on Wikidata marked the sixth year of Wikidata's existence. Although some GLAM institutions started working with Wikidata much earlier, it appears that this lag has enabled the National Library to build upon the previous experience and – among other things – to speed up large scale imports of authority and bibliographic data.

The second research question – which factors have played a key role in the collaboration – has yielded people as by far the most important success factor. When analyzing partial answers and comparing them with the positions held by the respondents and their roles in the collaboration, it becomes more than clear that apart from sharing interests and motivations it is the right mixture of bottom-up and top-down approaches that leads to the desired results.

The answer to the third research question, i.e., how exactly are people from Wikimedia Czech Republic and the National Library's employees involved, indicates that activities performed within the roles can in practice be very varied and that roles tend to shift over time, always building upon previous experience from the collaboration. The team is mostly composed of long-term members and so can be described as a fairly stable one. In this respect it seems to be different from other institutions where the activities are project-based or are delivered within a predefined time frame. The collaboration between the National Library and Wikimedia Czech Republic comprises both official projects with specific deliverables and deadlines and more informal activities. Also, official work hours come hand in hand with after-hours volunteering. This structure is very flexible and can lead to successfully getting things done and moving the collaboration forward to the future.

To conclude, our research has provided answers to all three research questions asked. However, we should note that in spite of the research design involving two different methods, more in-depth answers could possibly have been obtained if semi-structured interviews or focus groups had been added to the methods. Also, there are about 42 % of potential respondents who did not take part in the online survey. Therefore, it remains unclear what their answers might have been. Employing additional methods and involving the potential respondents is a possible direction for future research.

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