Wikimedia Deutschland e. V.

Gesellschaft zur Förderung Freien Wissens

https://wikimedia.de

Birgit Müller/Software Development Department

Technical Wishes Concept

Berlin, June 2015

Contents

Introduction

In the first half of 2015, Wikimedia Deutschland (WMDE) set up a team within their Software Development Department[×1] that was tasked with providing technical support to communities. Previously, WMDE addressed the technical wishes of the communities with several different initiatives, a good example being the Technical Wish List[×] that the WMDE Software Development Department started to work on in 2014. The newly formed team enables WMDE to provide such support in a regular and structured manner.

A transparent and structured process is essential if WMDE is to respond effectively to the technical wishes of the German-speaking community, which includes communicating prioritization as well as creating a feasible implementation plan and the necessary feedback channels for software development.

What are the communities' technical requirements and how can we best identify these needs together? Which wishes should we deal with first? How can we reach the different users of the software? What does good cooperation entail, and what types of communication and consultation are necessary?

The Technical Wishes Concept shows how to answer these questions and how to find solutions. It establishes a potential framework for cooperation between the WMDE Software Development teams and the communities, while being itself a prototype of the concept: in other words, an invitation to join in, try things out, and constantly improve.

The first Technical Wishes Poll

In September 2013, User:Raymond[×] launched the Technical Wishes Poll[×] to find out what editors' main technical concerns were.

[1] Throughout this document, web links to resources in German language are marked with a small cross (×).

The aim was to create a (prioritized) list that could then be passed on to the WMF or interested chapters. The reasons for conducting the poll included an increasing dissatisfaction among editors with new software features from the developers, as well as the assumption that nobody had yet carried out a poll that clearly focuses on editors' wishes.

Participation and spectrum of wishes

The call to participate in the Technical Wishes Poll took into account both the wishes of the German-speaking Wikipedia and those of sister projects.

The initiator of the poll narrowed down the spectrum of possible wishes to the following categories:

- Open bugs/feature requests on the Bugzilla issue tracker
- Tools from Toolserver/Tool Labs that need to be integrated into MediaWiki
- Other wishes

Toolserver/Tool Labs requests (e.g. infrastructure improvement, maintenance/adoption of orphaned tools) were explicitly excluded.

The focus of the wishes that were collected was therefore on the **improvement or enhancement of the software** to include functions that users already knew from Tools or that had not been available in any form up until then.

Around 115 active community members took part in the poll. Approximately 230 wishes concerning editing, categories, watchlist, search functionality, special pages, the mobile version, and other aspects were compiled. The main wishes mentioned included a cross-wiki watchlist and deep category intersection in search.

Cooperation with WMDE

After compiling the list of wishes and having the community agree upon prioritization, the WMDE Software Development team offered to support the initiative. Team members first wrote a script to help count the number of votes that each individual had received so that a Top 20 list could be

created. They then reviewed the items on the Top 20 list for the purpose of making initial assessments about their potential cost and implementation requirements; they also began work on addressing certain wishes.

A key aspect of the work surrounding the Technical Wish List was and is the cooperation between the community and the Software Development Department. From the very start, regular calls with the initiator of the wish list were held, information was shared, and the potential next steps were presented, discussed and agreed upon.

Prioritization and categorization of wishes

First the wishes were sorted in the Top 20 list according to the number of votes that each received. However, the Development team always tackled first those wishes that could, for whatever reason, be implemented straight away. In February 2015 this approach was incorporated into the presentation of the Top 20 list. Instead of listing the Top 20 simply according to the number of votes, the individual wishes were divided into the following categories: "Done," "Doing," "Next tasks," "Required: Single User Login finalization," "Long-term projects," "Wider community discussion/vote required," and "Too costly in relation to benefits." The new way of presenting the list was designed to clarify which wishes are currently being worked on, which are already complete, which next steps are scheduled, and which projects depend on certain requirements, or are not feasible. Infeasible wishes were too costly or too technically complex, meaning that addressing them could not be justified or that doing so would result in performance problems.

Using the Technical Wishes Poll as a starting point

On the basis of the first Technical Wishes Poll, it can now be assessed whether this is a suitable method for collecting, analyzing, and addressing the communities' technical needs. The exchange of information with active members from Wikipedia and sister projects is key to this process: joint discussions are the only way to find out which methods work and what can be improved. This prompted the launch of "Tech on Tour" – a series of real-life meetings to get a conversation started, initiated and facilitated by the Community Communications Manager.

Creating a concept on the road: Tech on Tour

What are the technical needs of different user groups of Wikimedia projects and how can these needs be collected and addressed in a structured manner? This was explored by Tech on Tour[x] when it was launched in March 2015 in Cologne.

The ideas behind the six events were to discuss key problems concerning software development, users' technical needs, the feasibility of using the first technical wishes poll[x] as a means of collecting and prioritizing the wishes of the communities, and to gather further ideas for improving the method.

The events were not geared exclusively toward "techies," but rather toward anybody interested. In total, 53 people participated in the meetings in Cologne (March 10), Dresden (April 11), Hamburg (April 22), Berlin (May 5), and Stuttgart (May 8), and in the working group that met at a volunteer support workshop (March 29). The events were organized in cooperation with local community members from these cities and documented the key points arising from the discussions. The

responses to the first Technical Wishes Poll and the findings from Tech on Tour[×] have provided the basis for the Technical Wishes Concept.

Structure of the events

Tech on Tour was continually developed as it progressed, right through to the last event, and the issues discussed depended on the interests of those present. The events were generally divided into two parts:[2]

A.) Introduction and presentation

- Tech on Tour project and Technical Wishes Concept
- Activities and working methods of the WMDE Software Development team[3]
- Technical Wishes Poll: creation, procedure, current status

B.) Discussion

- Feedback on and suggestions for improving the prototype for addressing technical wishes – i.e. the Technical Wishes Poll
- Different issues and focal points depending on the interests of those attending (information/communication related to software development, software's user-friendliness, etc.)
- Suggestions and ideas regarding a structured method of dealing with technical wishes

Key findings from Tech on Tour

The following paragraphs present the key results and findings from Tech on Tour with regard to the Technical Wishes Concept. For more insights, the discussion reports[×] show how the individual points were addressed within the context of software development or with regard to overall aspects.

2 The working group that met on March 29 at the volunteer support workshop was an exception. The time allotted was limited to an hour, and the content of the discussion was revised accordingly.

3 This item was not made a priority until after the initial event in Cologne.

Areas of interest and range of perspectives

Why do people get involved with Wikipedia or its sister projects? What are the main areas of interest? Volunteers from a wide range of areas participated in Tech on Tour. Many of them are not exclusively editors, photographers, script or tool writers, map makers, or people dedicating their time to maintenance work – instead, they often contribute in several areas.

There is a wide range of activities and areas of interest, including:

- Writing and photography work, data input, map making, and script/tool development.
- Support and organizational structures.
- Different degrees of online and offline participation: From working solely on Wikimedia projects or combining an involvement on-Wiki with real-life participation, to exclusively attending meetings and events even without contributing to Wikipedia.
- Participation in one project (Wikipedia) or several projects (Commons, Wikidata, Wikivoyage, Wiktionary, Wikisource).
- Work with (potential) new editors: Explaining and teaching Wikipedia; be it on Wikipedia, at meetings, in schools, at Wikipedia office hours, or at open editing sessions.

Why is this important to know?

Volunteers' involvement in projects covers a wide range of areas of interest and activity. This leads to different software demands and also different relationships toward software development and technical issues. For example, the relationship of a volunteer to development may only be to have simple, functioning software that requires no further thought, an interest in special functions and current developments, or in the programming of the software itself.

The areas and locations (meetings in real life, on Wikipedia) in which people are participating can help to identify how and where cooperation can take place and how people can be reached. Those people who use the software on a daily basis or who explain how it works to others know best

about the operability of the software. Depending on the area of activity, there are different usages – and each usage results in different technical needs.

Software development in the world of Wikimedia: access, information, communication, participation

The experiences that community members have had with software development in the world of Wikimedia have not been positive on the whole: many problems that have been mentioned are related to access, information structures, communication channels and means, or opportunities to participate. It does not seem to matter if the person has an interest in software development or not. Both editors whose work is mostly article-based and volunteer developers with a strong interest in software innovation have brought up similar problems. Addressing these problem areas and challenges has resulted in the establishment of this framework for future cooperation between developer teams and communities, thus making participation viable and making cooperation fun.

Problem areas: caught between lack of transparency and information overload

- Too much information in too many locations.
- Some information is passed on, some is not.
- There is often no clearly defined contact, or a constantly changing contact, and no consistent responsibilities (e.g. the reporting of software bugs, who deals with what).
- Confusion over who is developing what and which cooperation structures are in place (WMF teams, volunteer developers).
- Information on software innovation and software tests is generally written in a technically complex style and in English.
- Phabricator is perceived as being difficult to use. The following reasons were stated: English language, technical language, no Wiki, no welcoming culture.
- Little easily accessible information.
- There is too little expert knowledge available to estimate the amount of time and effort that software development requires, which resources are available, or what is feasible at all.

Challenges: ensuring both transparency and access to participation

- Provide information and use communication channels that are accessible to the highest possible number of editors and, for example, allow participation in software tests.
- Build language bridges (technical language/lay language, English/German).
- Filter and edit information on software updates and developments.
- Improve transparency of product management decisions: clearly communicate what resources are available, what can be implemented and how, why not every technical need is feasible, and the thinking behind the prioritization.
- Transparency of resources and accountability: clearly communicate who is the contact for which area and the areas where there are no accountable persons and/or resources.
- Stimulate and facilitate cooperation and an exchange of information: find ways of improving the cooperation between the various different community volunteers and employees from chapters and the WMF, including possibilities for sharing knowledge and the ability to recognize and take different perspectives into account.

Using the Technical Wishes Poll as a prototype to determine technical requirements

With the Technical Wishes Poll initiated by User:Raymond and WMDE's subsequent compilation of the Top 20 list, one possible way to listen to and address the communities' technical wishes in a structured manner has been already tested. One of the main issues at Tech on Tour was whether the method is effective and suitable for everyone, and what could be improved. Tour participants rated the Technical Wishes Poll as "good" to "excellent".

The poll received positive feedback for:

- Being a familiar and tested method
- Taking place on-wiki
- Asking people what their wishes were
- What community members feel is needed is actually developed

Comments and suggestions to improve the poll methodology and communication included:

- The poll drew little attention – more advertising work should be done through various channels.
- Such polls are too complex and too technical for some people – it would be good to moderate the poll, provide support when collecting answers, and clarify early on anything that is unclear.
- Technical requirements change. If polls were carried out at shorter intervals, they could better identify current demand. The number of tasks could be adapted accordingly (e.g. Top 5 or Top 10 instead of Top 20).

Technical wishes: a concept familiar to everyone?

What are “technical wishes” anyway? How can the different user groups be reached and what works for whom? Some people are not engaged in software development. Those who primarily write articles aren’t necessarily inclined to get involved with technical issues.

The term "power user" is often used in the world of Wikimedia. Typically, it refers to someone who has been a volunteer active for a long time, who has certain roles and rights within the community, and who has consistently acquired expert knowledge on the projects. The term is often mistakenly assumed to imply expert technical knowledge. But that isn’t necessarily the case. Someone may have been a volunteer active for a long time and know a great deal about the projects, but is not interested in software development and/or has difficulty formulating his or her technical wishes. Someone may have good technical knowledge in one field, but little to none in another.

Why is that important?

If we are trying to ensure that everyone's technical wishes are addressed, it is important to ask and think about what can work for everyone, and how. Assumptions like **"**power users have excellent technical knowledge**"** cloud our thinking when considering what channels and types of communication to use and how to respond to technical wishes. One aim of Tech on Tour was to identify and discuss the different perspectives and attitudes toward software development. There are, roughly speaking, three perspectives, but there will naturally be overlaps: editors can also be tool developers, of course, or disseminators of technical information, etc. The following diagram should therefore only be taken to be roughly representative.

Perspective I (mostly editors)

- Editors produce the content of Wikipedia, are responsible for quality assurance, and network in editorial offices, among other activities.
- A simple, functioning environment is important to many of them. Their work entails writing articles and adding photos, and not (only) tinkering around.
- Many of them are not familiar with the concept of "technical wishes"
- A keyword here is "**non-user-friendly"** – this could mean complex or unclear information, how easy the software is to use, or missing functions.
- A great many software functions and the many different ways in which they can be used (software components, default settings for everyone, opt-ins, add-on tools, the option of integrating scripts into the personal Common.js page, etc.) are perceived as confusing, impractical, and non-user-friendly.
- Software developments only become relevant to a person if they positively or negatively affect their daily work.
- Experience with working with new volunteers: Wikipedia is too complicated. New volunteers who are interested in working on articles have to learn too many additional things and get to grips with a very complex environment.

- The people who show new Wikipedians the ropes know a lot about what newcomers find difficult.

Response to technical wishes and support possibilities

- The Technical Wishes Poll only works as an instrument for participation to a certain extent (it is deemed too “technical”) – moderation, queries, and “decoding” are important.
- Workshops/projects on topics such as user-friendliness; “decoding work” and listening: editors do have technical wishes, but may not express them as such.

Perspective II (people who additionally or exclusively work in support or organizational roles)

- They carry out important interface maintenance and organizational work.
- Some have good technical knowledge, some do not.
- They are concerned about the communities and worry that individual volunteers lose interest in “keeping on top of things.”
- They know a lot about what people find difficult – whether it’s new volunteers or established editors.
- They are frustrated that there is no contact person for many things, or that it is not clear who is responsible (e.g. when bugs are reported).
- They are frustrated that the technical needs of the community receive insufficient attention.
- They believe there are too many information channels and too much non-prioritized information.
- They also believe there is too little easily accessible information and too few easily reachable contact points.

Response to technical wishes and support possibilities

- The Technical Wishes Poll is a good option, but it should be moderated.
- Gathering the wishes on-wiki is a good option; this involves a familiar environment and

familiar tools.

- Conduct poll at shorter intervals, requirements change all the time (a feasible Top 5 or Top 10 instead of a Top 20).
- Workshops and meetings on user-friendliness and flows of information, etc.
- Workshops on individual elements (e.g. on useful tools/gadgets).
- Transparency of decisions regarding product management and available resources.

Perspective III (tool developers, script writers, map makers)

- They develop parts of standard features: scripts, maps, tools that are highly valued by many in the communities and some of which are key components of Wikipedia (e.g. map integration to articles, etc.).
- They're frustrated with product management's priorities - "no support of important tools," "insufficient support of Tool Labs," and "no reaction to bug reports" are common complaints.
- The tech community is not only important for the development of features, but also as a contact point for technical issues.

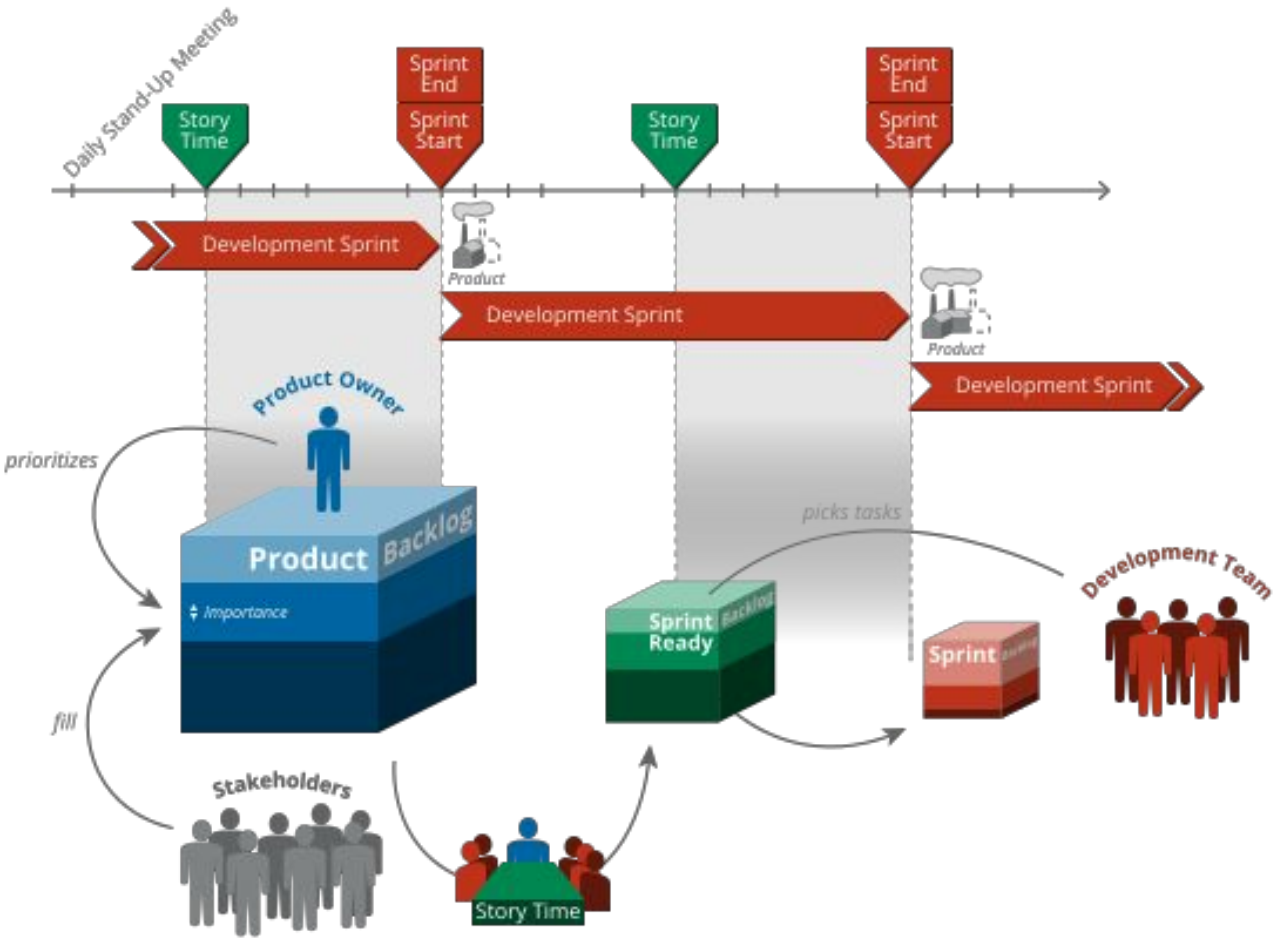
Response to technical wishes and support possibilities

- The Technical Wishes Poll is a good method.
- Polls should be carried out at shorter intervals so as to better address current requirements.
- Workshops on special topics (gadget workshop, etc.).
- Transparency of decisions regarding product management and available resources.

Agile processes in the Software Development Department

For mutual understanding and good cooperation, it is essential to know what development processes are currently in use and what types of communication are required.

The teams at WMDE work in two-week development phases, so-called “sprints”. Large jobs (“stories”) are divided up into smaller jobs (“tasks”), which are then worked on during a sprint. Tasks are selected every two weeks at the start of a new sprint. Examples of tasks include repairing a bug, checking the code of a developed feature, or researching the implementation potential and expense of a technical need. This gives those outside the process a better overview of what the team is currently developing, while also enabling the team to react quicker to problems and new demands.



There is also a “story time” every two weeks, at the halfway point of a sprint. This is where the larger jobs (stories) are broken down into smaller jobs (tasks). The larger jobs are formulated as so-called user stories (e.g. “As a Wikipedia editor, I would like to be able to add individual sections from pages to my watchlist, so I don’t have to monitor the entire article”). A technical wish is generally a user story. Criteria are determined as to when the task is to be considered completed. Also discussed are feedback from test runs, reported bugs, and other similar topics.

The story time is the basis for the smooth and problem-free planning of the next two-week sprint. New technical wishes resulting from a poll or workshop are frequently saved in the “backlog,” where the team’s tasks are saved and a corresponding user story is created. The product manager then lists the individual stories in order of priority, depending on feasibility, urgency, and available resources.

No new stories can be added once a sprint is in progress. Exceptions to this rule include critical bugs that need to be resolved immediately. New stories will not be discussed until the following story time; associated tasks are addressed in the next sprint planning meeting.

Communication between the Software Development Department and the communities is key. What exactly do people need? What is being worked on right now and what comes next? What are the problems? Information regarding the status of the project or feedback phase in question is provided throughout the development process: the start of the sprint (day 1), story time (day 8), and the end of the sprint/start of another sprint (day 15/day 1).

The work done on the Technical Wishlist is documented in Phabricator as well as on German Wikipedia.

Not all wishes can be implemented and not everything can be done quickly. The Software Development team assess, however, roughly the likelihood of a task’s implementation and communicate transparently what can or cannot be done, and why and how it can or cannot be done, as well as offer potential alternatives.

Technical Wishes Concept

A solid foundation for addressing technical wishes

The findings from Tech on Tour, as well as the subsequent analyses carried out and the many conversations with other volunteers from the communities, provide WMDE and WMF employees with a solid foundation for addressing the community's technical wishes.

Take into account different interests and knowledge levels, and different attitudes and wishes

- The diverse range of activities and interests among the volunteers to Wikimedia projects brings with it a broad spectrum of technical wishes and different attitudes toward the topic of software development.
- "Technical wishes" is not a familiar concept for everyone and polls are not easily accessible for everyone. What is essential is to find new ways to find out what all of the different users find important when it comes to software and what would make their work easier.
- Feedback and ideas on technical wishes do not require expert knowledge; they simply need to be decoded well, e.g. people who provide support for others to join Wikipedia may have lots of knowledge about what does and doesn't work for which people, without necessarily being able to formulate this into a "technical wish."

Provide transparent communication, clear contacts, and easy-to-understand information

A well-communicated structure lays the basis for the Technical Wishes Concept. This includes:

- Discussing the ways in which wishes from the community can reach the Software Development Department.
- Disseminating knowledge as well as how the developer team works, how much work and cost each task entails, what is possible in terms of implementation, and how tasks are prioritized.

- Making information comprehensible.
- Widely publicized information on items such as polls, developed features, and invitations to trials.
- Mutual listening and knowledge sharing with regard to what is being done how and why, and what is important to whom (e.g. at meetings, test phase or polls).
- Clearly defined contact persons.

Continue work on tried-and-tested methods and improve them

- The first Technical Wishes Poll received very good feedback, but there were also comments on what could be improved. The poll will continue to be used as a means of listening to the community's software wishes and it will be changed in accordance with the feedback received.

Find new approaches and ways to reach the various user groups

- Polls can have barriers and are not the best option for everyone.
- Other approaches in identifying the wishes of the different user groups and responding to them are constantly being developed and tested. The findings from Tech on Tour serve as a pool of ideas for alternative methods.

Use familiar and tested communication channels and locations

- The German-speaking Wikipedia has proved to be a good location for the Technical Wishes Poll: this is where the very people whose wishes are being addressed can be found.
- At Tech on Tour, it became clear how useful and important meetings and exchanges in "real life" are – in fact so useful and important that "real-life" cooperation has become a key component of the Technical Wishes Concept.

Methods of determining wishes

The feedback from the Technical Wishes Poll prototype and the further findings from the discussions at Tech on Tour were prerequisite to establish two methods for identifying wishes in a structured and transparent manner. The team of developers addresses the wishes that are arise from the interaction between the two methods. In 2015 the Software Development Department will continue to test the ways of identifying and responding to wishes.

Moderated polls

Moderated polls can take place twice a year on Wikipedia. The aim is to keep up to date with current and changing technical wishes and to regularly receive and be able to implement a prioritized list of feasible tasks.

Topic or user-specific workshops

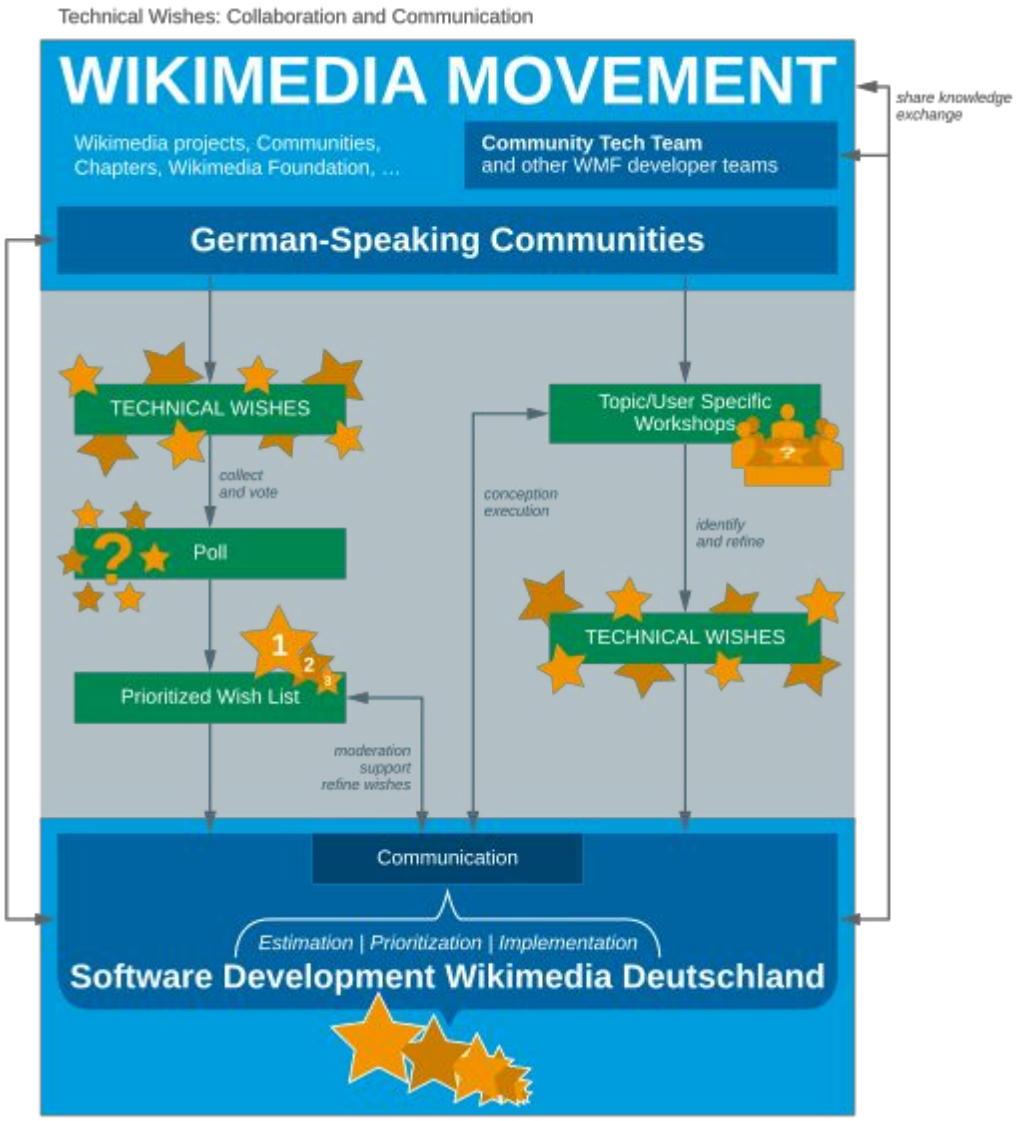
Topic or user-specific workshops can be held twice a year. The aim is to gather information on the often differing and specialist requirements and to find out what would be helpful for the mentors, editors, the support team, etc.

Cooperation, information, and communication

Information and links to polls, workshops, and current developments can be found on the main project page WP:Technical Wishes[×]. Updates on current developments are posted on the pages of the poll or workshop in question. Announcements of upcoming polls and workshops/projects, "finished" features, and invitations to test phases are widely publicized.

The developer team uses Phabricator for the coordination of the work and for other teams' interfaces – all current and coming tasks are listed accordingly in Phabricator.

WMDE's Software Development teams work very closely with the WMF's Community Tech team created in 2015. Many requests that come from the German-speaking community will be relevant in other communities, and vice versa.



Next steps

Poll with live launch at WikiCon

The next Technical Wishes Poll is scheduled for September 2015. The idea is to launch it with a live event at the [WikiCon 2015]× in Dresden and to then continue the poll on Wikipedia. The event has been submitted for the program of WikiCon and will go ahead if the proposal is accepted.[4] The poll's run time is limited to approximately four weeks. In the first half, wishes can be collected,

[4] The German version of the Technical Wishes Concept was published on June 2nd. As planned, the next technical wishes poll has been launched on September 19th.

tweaked, and structured. The voting takes place in the second half. The poll is moderated and there is support for respondents to formulate their technical wishes. A list of top wishes is compiled, which the developer team will then review, prioritize according to feasibility, and implement.

Topic-specific workshop InfoCamp[5]

How should information structures on software innovations, software changes, and existing functions on Wikipedia ideally look? What does the software need for Wikipedia to become more user-friendly?
Considering the issue of usability, concrete technical wishes are to be developed on a weekend in autumn 2015, and ideas for an improved information structure regarding software development will be discussed and potentially implemented right there and then. The workshop is especially designed toward people who introduce other people into the world of Wikipedia, or toward those who work as mentors, Tech Ambassadors, often answer questions, or who simply find the topic interesting. The focal points of the event will be determined by the results of Tech on Tour[×], but also by the From Echo to Visual Editor[×] workshop at WikiCon 2014[×]. The workshop was initiated and will be run by the Software Development Department in cooperation with interested community members.

If you are interested, you are welcome to participate in polls or workshops, ask questions, test pilots, maintain the main pages, follow the team's work in Phabricator, and work on projects.

[5] After the concept was published in German, we noticed that we were moving too fast and we decided to slow down the process. We readjusted the original schedule based on learnings so far. The first workshop will take place in 2016.

Contact

Feedback and queries concerning the concept are always welcome. Contacts for the specific topics are:

Birgit Müller (concept, communication, network): birgit.mueller@wikimedia.de

Kasia Odrozek (product management): kasia.odrozek@wikimedia.de

Software Development at WMDE: software@wikimedia.de

Credits

Birgit Müller (WMDE): *"*Tech on Tour*"*, CC BY-SA 4.0, p. 6
https://commons.wikimedia.org/wiki/Category:Tech_on_Tour_2015#/media/File:Tech_on_Tour_1.jpg
Henning (WMDE): "WMDE SD&E Agile Process", CC BY-SA 4.0, p. 15
https://commons.wikimedia.org/wiki/File:WMDE_SD%26E_Agile_Process.svg
Henning (WMDE): "WMDE Technical Wishes - Collaboration and Communication", CC BY-SA 4.0, p. 20
https://commons.wikimedia.org/wiki/Category:Wikimedia_Deutschland_%E2%80%93_Technische_W%C3%BCnsche#/media/File:WMDE_Technical_Wishes_-_Collaboration_and_Communication.svg