



WIKIMEDIA
FOUNDATION

**BUILDING STRONGER
COMMUNITY
RELATIONSHIPS WITH
BITERGIA ANALYTICS**



Bitergia



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Visit bitergia.com for information about Bitergia's services or email info@bitergia.com to schedule a demo.



ABOUT WIKIMEDIA® FOUNDATION®

Among other vital community projects, the Wikimedia Foundation hosts Wikipedia, the free online encyclopedia, created and edited by volunteers from around the world.

Wikimedia Foundation provides essential infrastructure for free knowledge. The Wikimedia movement is composed by individual volunteer contributors, the Wikimedia Foundation, independent Wikimedia chapters, plus other organizations and companies which contribute code

GROWING A MORE PRODUCTIVE COMMUNITY

The **goal** of Andre, Developer Advocate at Wikimedia Foundation, is to engage and facilitate the integration of new developers into the Wikimedia engineering ecosystem

"As an advocate, my goal is to make Wikimedia software easier and more attractive for new contributors. I need statistics to see if Wikimedia is successful in bringing in more contributors but also who stops contributing and why."

Andre Klapper
Developer Advocate at
Wikimedia Foundation

In working towards this goal, Andre had several **questions**:

- How many volunteer contributors are providing code?
- What percentage of contributors come from Wikimedia Foundation employees versus Wikimedia volunteer contributors?
- How are contributor and contribution numbers changing over time?

SOLUTION: BITERGIA ANALYTICS DASHBOARD

Bitergia® provided a customized dashboard with metrics that answered Wikimedia Foundation's questions. The Bitergia Analytics dashboard collected data from Wikimedia Foundation's collaboration tools, specifically Gerrit, Git, and Mailing lists.

We translate insights from Bitergia Analytics into business outcomes through retention statistics.

The procedure is to look at the Bitergia dashboard to see how many developers have not contributed during the last six months. We consider these people as having left the community. Then, we sent surveys to these people, to understand the experiences and challenges of contributing. This helped us learn why people leave the community and develop strategies for improving talent retention.

Andre Klapper,
Developer Advocate at
Wikimedia Foundation

Metric Visualization - Developers Getting Inactive

To know which contributors to reach out to for the survey, Andre looks at the *Developers Getting Inactive* visualization. It provides a list of contributors who have not contributed in 6 months, which is Wikimedia Foundation's definition of someone becoming inactive.



Developers getting Inactive [Search](#)

Period of getting inactive (last commit 6 months ago) ⇅	Author ⇅	Commits ⇅	Last Commit Date ⇅
Oct 24th 2018, 12:41 to Apr 24th 2019, 12:41	developer 1	4	Apr 24th 2019, 05:05
Oct 24th 2018, 12:41 to Apr 24th 2019, 12:41	developer 2	2	Apr 24th 2019, 02:14
Oct 24th 2018, 12:41 to Apr 24th 2019, 12:41	developer 3	2	Apr 23rd 2019, 13:12
Oct 24th 2018, 12:41 to Apr 24th 2019, 12:41	developer 4	22	Apr 23rd 2019, 06:30
Oct 24th 2018, 12:41 to Apr 24th 2019, 12:41	developer 5	182	Apr 19th 2019, 23:00

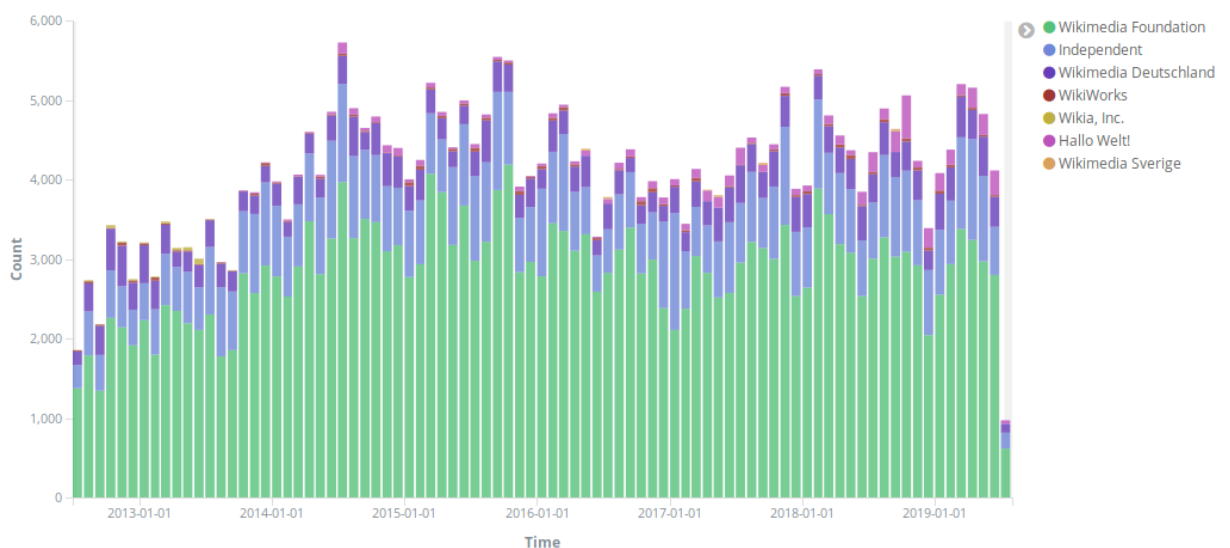
List of developers who have not contributed in more than 6 months (i.e., who became inactive).



Metric Visualization - Code review organizational diversity

Volunteer developers play an important role in the Wikimedia community. For this reason, it is important to know the total number of contributions these volunteers make in comparison to the number of contributions coming from Wikimedia Foundation employees. The Code review organizational diversity visualization shows over time how many contributors in each group contributed.

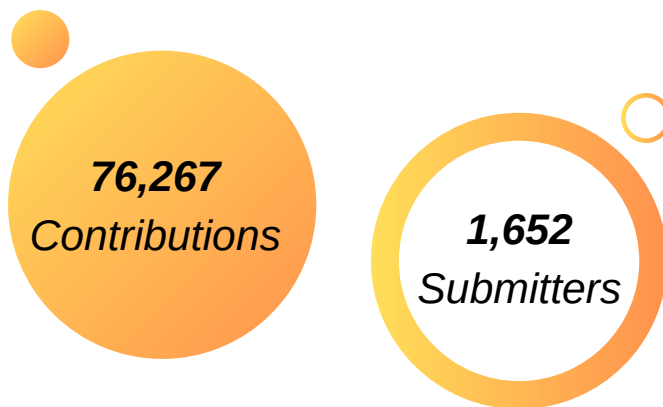
Organizations



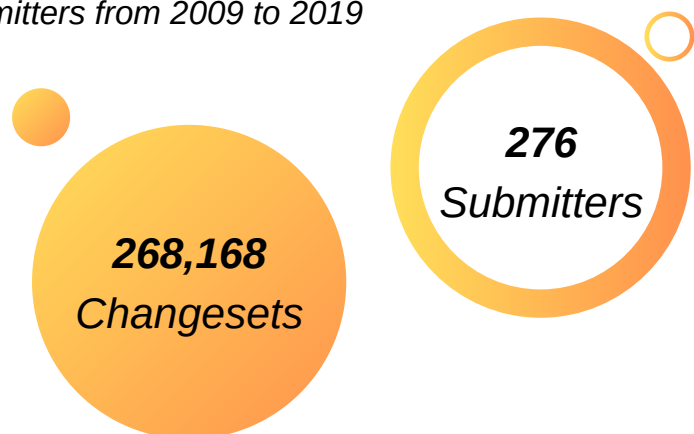
Total Wikimedia activity contributing to code review (Gerrit) grouped by organizations since the migration to Gerrit in 2012 to 2019

Metric Visualization - Total Contributors from organizations

In order to get the total number of contributors and their contributions, Bitergia provided Wikimedia Foundation with a data enrichment process to recognize all volunteer developers as “Independent” in the diagram showing contributions from Organizations. Filtering the data accordingly provided the following answers.



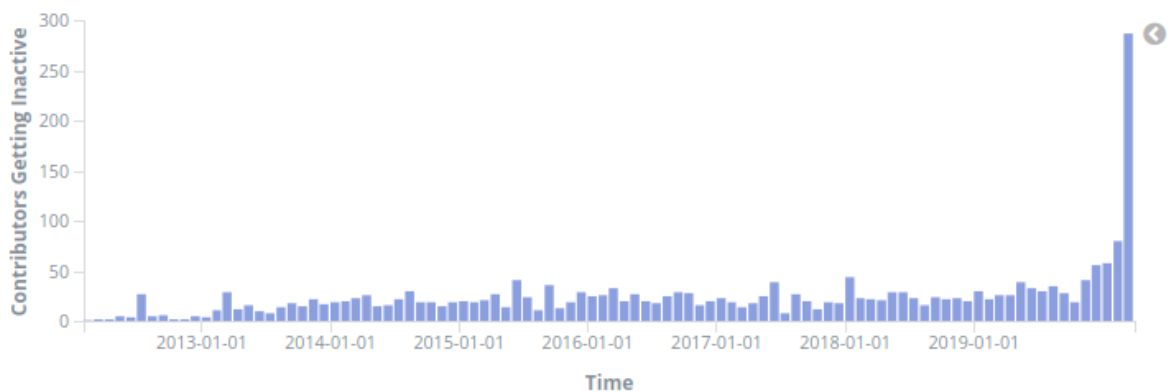
Volunteer contributors: Total changesets to Gerrit and number of changesets submitters from 2009 to 2019



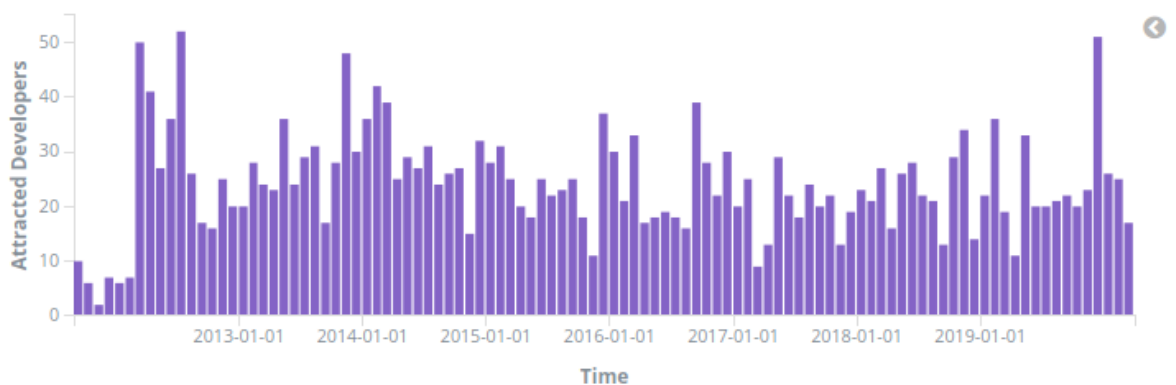
Wikimedia Foundation contributors: Total changesets to Gerrit and number of changesets submitters from 2009 to 2019.

With this information, Wikimedia Foundation knew the number of attracted developers and their retention rate. The organizational affiliation allowed to drill down into the attraction and retention numbers for employees and volunteers separately.

People Leaving



Attracted Developers



Top graph shows over time when contributors last contributed. Bottom graph shows over time when contributors first contributed. Together, these are graphs showing attraction and attrition.

ABOUT BITERGIA ANALYTICS PLATFORM

Bitergia Analytics is specialized in analyzing software development projects and its core platform is 100% open source. It collects data from 30+ different data sources related to collaborative and social software development and allows you to identify contributors and organizations for more detailed reporting and improve decision making

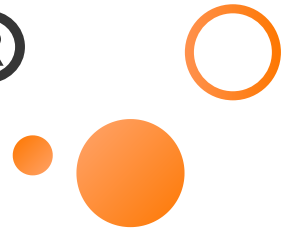
- Track growth, performance, and progress
- Discover influencers & analyze trends in your project
- Understand code review processes, ticketing, and issues
- Cross, combine, and visualize data
- Easily analyze comments, forums, and chats

ABOUT BITERGIA®

Bitergia helps companies improve the ROI of their software development projects by providing tools and knowledge to improve decision making. It is specialized in analyzing software development projects and its core platform is 100% open source.



ABOUT BITERGIA®



Company with 15+ years experience in research focused on collaborative software development methodologies and software development quality models. Our specialized team has been working with a wide variety of companies and organizations that had a need for actionable insights and better understanding of software development community and processes.

