



Data Sources

Existing Data (Secondary)

- Attendance records
- Intake forms: demographics, etc.
- Staff or participant journals or observations
- Existing participant satisfaction data
- Meeting minutes
- Previous reports
- Other program documentation

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Data Sources

Primary Data Collection

- Program participants
- Program staff
- Program administrators
- Community members
- Program collaborators/partners
- Others who interact with participants or program in some way

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Types of Data

Qualitative data

- Data described in terms of quality, as opposed to "quantity"
- Often obtained through asking open-ended questions
- Most useful when:
 - you would like information in people's own words
 - the questions you are asking have too many possible answers for you to know/list

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Types of Data

Quantitative data

- Data described in terms of a quantity or number
- Quantitative data is collected through closed-ended questions
- Most suitable for collecting numeric data such as:
 - Age, hours, staff size, number of users, etc.
 - Self-reported behaviors collected quantitatively on a scale
 - Self-rated attitudes and judgments constrained to a set of choices

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Data Collection Methods

- Surveys
 - Satisfaction with program
 - Pre-post tests (Knowledge, behavioral self-report, specific instruments, etc.)
- Individual Interviews
- Focus Groups and Facilitated Dialogues
- Journals and Reflections
- Physiological measures
- Observations, Tracking logs, and Records

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User Metrics API (UMAPI): An Introductory Overview

- UserMetrics API is the name of a platform developed by the Wikimedia Foundation to measure user activity based on a set of standardized *metrics*.
- Using this platform, a set of key *metrics* can be selected and applied to a *cohort* of users to measure their overall productivity.

Notes:

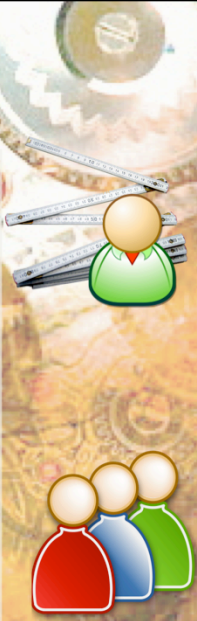
The platform is designed for extensibility (creating new metrics, modifying metric parameters) and to support various types of cohort analysis and program evaluation in a user-friendly way. It accepts requests via a RESTful API and returns responses in JSON format.

As of May 2013, the UserMetrics API is used internally at the Wikimedia Foundation by the Editor Engagement, Global Education and Grantmaking programs. The scope of the project is being extended to include external customers, researchers, and community members. If you are interested in using the UserMetrics API, please contact usermetrics@wikimedia.org.

Cohort Metrics?

Metric - well-defined values or sets of values that can be computed for any user registered in Wikimedia projects

Cohort - set of users sharing one or more property or attribute—the time of account creation, for example, or participation in an outreach event or experimental group.



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Notes:

The UserMetricsAPI generates cohorts based on [userTag](#) information. At its most basic, a cohort can be identified by a single userTag (e.g., “e3_experimental_group”).

Notes:

For example, we could look at the value of the [“bytes_added”](#) metric to see how many bytes of content a student has added to a given wiki in the last week, but if we are interested in evaluating the success of her class, we would more likely look at the number of bytes added by the entire class (i.e., the “enwiki_editing_class” cohort). In this case, the bytes_added metric is used to help determine if the class is successful. We could look at additional metrics to provide a fuller picture: the [revert_rate](#) of student edits, for example, or the [survival_rate](#) of users in the student cohort. We can’t directly measure the class’s “success,” but we can measure a number of more concrete quantities that help us determine it and compare it with other classes or other similar initiatives.

Cohort Metrics?

Cohort Metrics help us understand activity and behavior of user groups.

From quality, quantity and type of user contribution, to how well our editors are retained.

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UMAPI Purpose

- **Standardization** Standard set of metrics to:
 - permit everyone to have the same understanding
 - provide comparability across efforts within the organization to examine impacts.
- **Workflow (Access)** Streamlined process to obtain and analyze data needed to evaluate programs, projects, and initiatives.

User Tagging (Group Identification) User Tagging is used to identify groups of users so that they can be studied collectively--all subjects of an experiment, for example, or all users who created accounts at an outreach event.

Standardization Standard set of metrics permitting everyone to have the same understanding of what we mean when we say “an editor has been retained” or “an editor is active.” The reports generated by the system can be used to compare an experimental group to a control group or across the organization to compare impacts across efforts.

Workflow (Access) Streamlined process for obtaining and analyzing data needed to evaluate projects and initiatives.

Notes: The system is designed to be both flexible and extensible, so that existing metrics can be customized as needed, and new metrics can be added over time.

Metrics Standardization

- Can be applied to any Wikimedia project
- Unambiguous and consistent measurement
- Project level comparability
(to measure the success of an experimental treatment or outreach initiative)
- Organizational level comparability
(to compare the impact of programs and projects across the organization)

Standardized metrics can be applied to any Wikimedia project to help evaluate the impact of initiatives in an unambiguous and consistent way.

The set of metrics used by the UMAPI can be used at the project level to measure the success of an experimental treatment or outreach initiative, or on the organizational level to compare the impact of projects across the organization.

The metrics—user retention or user contribution (quality, quantity, type)—are measured consistently and clearly defined so that all users can see what the numbers mean.

For more background information, please see:
<http://meta.wikimedia.org/wiki/Research:Metrics>

Workflow

- **Define cohorts**

Cohorts can be defined by specifying custom lists of usernames/userIds.

- **Measure**

The quality, productivity, or retention of these cohorts can be assessed via a standard set of metrics.

- **Compare**

Cohorts can be compared against each other or against a baseline.

Adding Custom Cohorts

- **Prepare UserIds list:**

| Username, project |
|-----------------------|
| Frank Schulenburg, en |
| Sarah Stierch, en |
| Janstee, en |

Note: Most Users Do Not Have Underscores In Their Names
If_This_Fails_try_replacing_underscores_with_spaces,en

- **Save as csv file**
- **Follow “Upload a new cohort” link from “Cohort” selection screen**

Adding Custom Cohorts

User Metrics API Cohorts Metrics Jobs About Contact

Cohort Name
(automatically checks availability)

Wiki Project (select one or specify in file)

CSV File No file chosen

****See Guide 1: Adding Cohorts****



Demonstration

FORMER SLIDES REMOVED

*NEW DEMO SLIDES TBD with release of
"WikiMetrics" late July*



Volume Metrics

bytes_added: indicates the amount of content an editor has added, removed, and modified within a given time period.

The system returns the net bytes contributed, bytes added (positive), absolute bytes contributed, bytes removed (negative), and edit count (e.g., [100, 150, 200, -50, 2]) for your cohort in the specified time period.

Impact: Content and Participation
All Programs (what about images?)

Other Potential Metrics

- **Retention metrics**

Help measure whether an editor is active and how active an editor is during or after a given timespan: **threshold**, **survival**, **live_account**.

- **Volume metrics**

Help measure the quantity of an editor's wiki work: **edit_rate**, **bytes_added**, **time_to_threshold**, **pages_created**.

- **Quality of contribution metrics**

Measure the LACK of quality in an editor's work: **revert-rate**, **blocks**.

- **Type of contribution metrics**

Measure the diversity of an editor's wiki work: **namespace_edits**

Aggregators and associated metrics

- **sum** Sum of the metric values returned for every user in the cohort.
- **mean** Mean of the metric values returned for a cohort.
- **std** Standard deviation of the metric values returned for a cohort.
- **median** Median of the metric values returned for a cohort.
- **min** Minimum metric value returned for a cohort.
- **max** Maximum metric value returned for a cohort.
- **dist** Distribution values for sum, mean, std, median, min, max, returned as an array for each cohort.

Notes: In addition to global parameters, request URLs may contain metric-specific parameters and aggregators. For more information about these, please see [‘Metric-specific parameters and aggregators’](#).

Each metric has a corresponding set of metric-specific parameters and aggregators that can be used with it. Though all metrics can use an aggregator, “average” or “median”, for example, not every aggregator is relevant (or currently implemented) for each metric. The following aggregators are used in the UserMetric system: sum, mean, std, median, min, max, proportion and dist.



Notes: The UserMetrics API receives each submitted request and returns either the cached response (for requests that have been previously processed and that do not specify a 'refresh' parameter) or a new response generated by the UserMetrics engine (for new requests). In either case, the data is returned as JSON objects. Each JSON object contains the metric data as well as information about the request itself (i.e., request metadata).

DOs and DON'Ts for UMAPI

DO:

- Get consent to an opt-in before collecting any information. ***See Example Sign-in Sheet for consent***
- Tell participants:
 - what you are collecting (i.e., User tag)
 - what you plan to use it for (i.e., tracking user activity metric),
 - what level of confidentiality they should expect, and
 - you will be transferring this data internationally to WMF for processing in the US.
- Keep all cohorts above a minimum size (i.e., No cohorts of 1)

DOs and DON'Ts for UMAPI

DO NOT collect information/base cohort membership on categories that are protected under the EU Data Protection Directive. You should NOT collect:

- Real Names
- Date of birth (nor age if it can be tied to a specific user)
- Gender, sexual orientation, racial or ethnic origins (if it can be tied to a specific user)
- Medical conditions or disabilities
- Addresses or Phone Numbers
- Passwords
- Social security or other governmental identification numbers
- Political affiliations or religion

DOs and DON'Ts for UMAPI

DO NOT:

- Release or publish per-user information - only publish aggregated numbers
- Publish the membership of the cohorts (i.e., id tags of who is in what cohort)
- Use/inspect/publish the cohorts, or data about the cohorts, created by other groups
- Use for personal use – Access to the UMAPI is for movement or organization-related purposes only