

Research and Data

Q1 2015

Outline

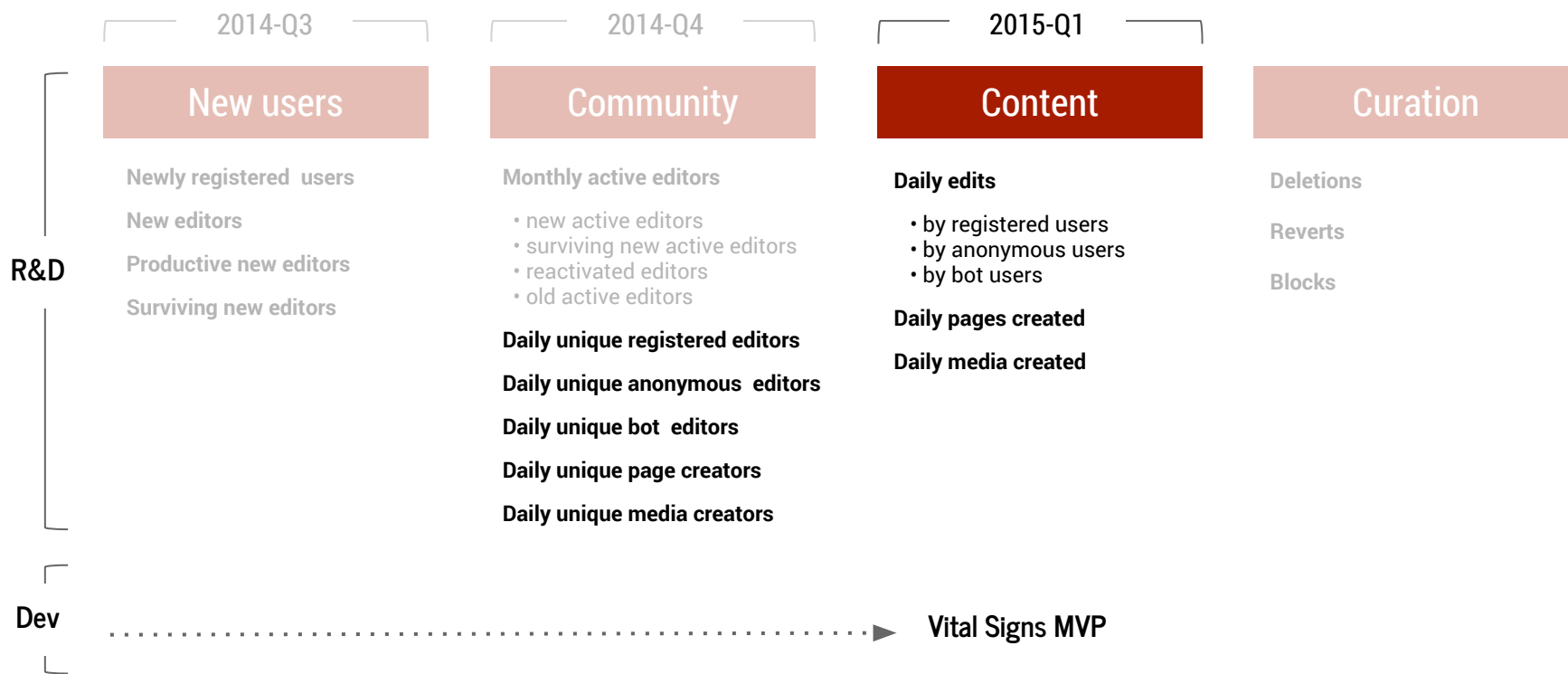
Q1 goals review

Q2 proposed goals

staffing outlook

Q1 goals review

Primary goal: Metric standardization



Primary goal: Metric standardization

Shipped all 11 metric definitions

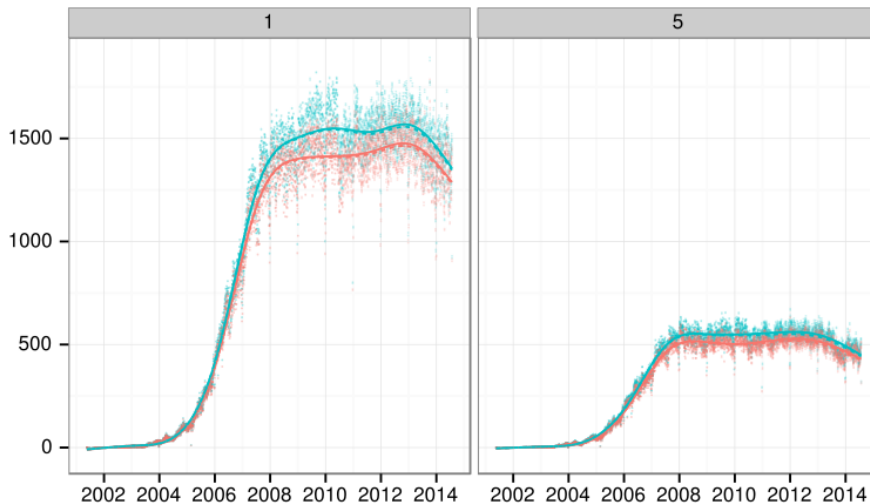
- human-readable definition
 - parameter recommendation
 - SQL specification
- (including metrics listed as *stretch goals*)

#407 #408 #415 #416 #417

#418 #419 #420 #421 #422 #423

Performed background analysis

- bot identification method
- activity on deleted pages



See: https://meta.wikimedia.org/wiki/Research:Daily_unique_registered_editors

Primary goal: Team alignment with Editor model

Set **baselines** and **annual targets** for Product teams

 **Growth:** *completed* (desktop user acquisition/activation/retention) #501 #511

 **Mobile:** *completed* (mobile user acquisition/activation) #343 #409

 **Visual Editor:** *started* (needs additional input from Product)

 **Multimedia:** *on hold* (deprioritized due to MediaViewer)

Primary goal: Traffic metric definitions

📄 Pageview definition #288

- Draft definition: *in progress*
- Implement a prototype using the draft definition: *completed*
- Set down use cases to refine the draft definition: *in progress*

📄 Interim unique client definition (*stretch goal*)

- LUCID proposal: *started* #373
implementation on hold due to technical and privacy-related concerns

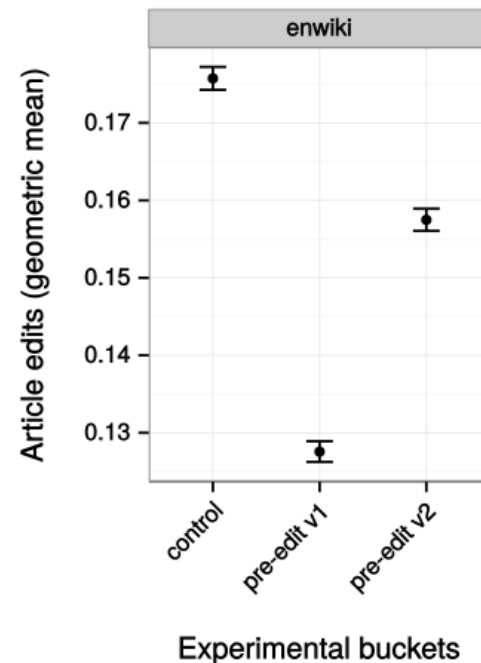
Secondary goals: Growth research

Anonymous editor acquisition

- experimental design for 3 tests and completed analysis for 2 tests [#465](#) [#559](#)

Task suggestions

- research questions for task recommendations [#573](#)
- completed analysis of performance of *morelike* API [#563](#)
- experimental design for test #1 in production [#621](#)



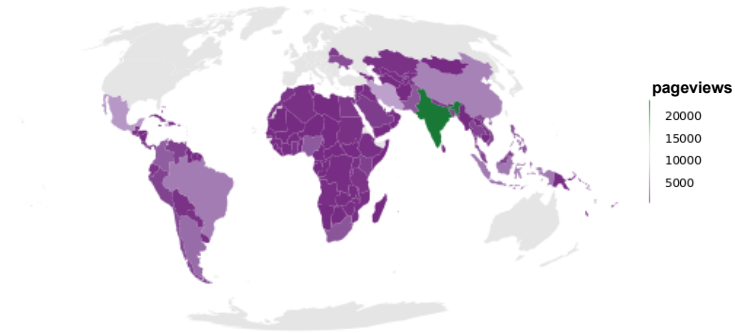
Secondary goals: Mobile research

Mobile app analytics: *completed*

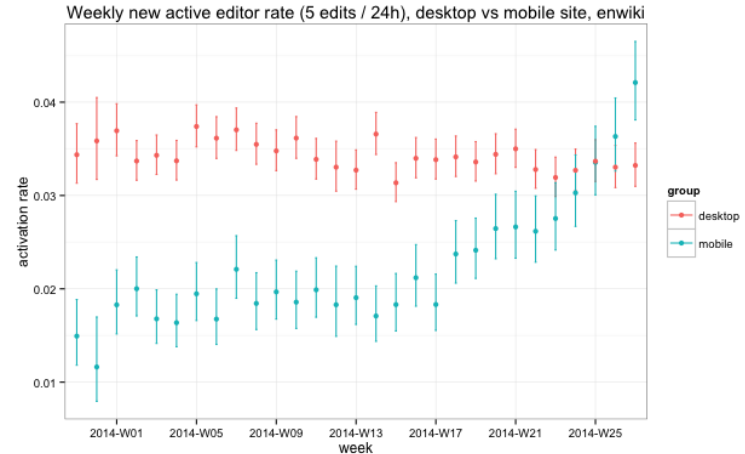
- unique clients, PVs, session data #379

Mobile traffic/participation trends: *completed*

- impact of tablet switchover #341 #356
- mobile activation analysis #352
- mobile trend report @ monthly metric #375
- mobile trend report on Meta #294






90 days readership by desktop users accessing mobile



Secondary goals: Editor survival models

Active editor survival models

-  Prediction models for 1-month, 6-month, and 12-month survival
completed #437
-  Generate reverts and social interaction data:
completed #344 #436
-  Prediction models based on new data; identify the most important variables:
delayed #438

Consulting and ad-hoc analysis

Multimedia

MV pref elicitation test design #391
impact of MV on edit volume #370

VE

new VE usage data #361

Strategy

edit conflict data analysis #325

Legal

ACLU data request #349

UX

thumbnail size usage #363

Platform

usage of PDF renderer #368
impact of SSL changes on NavTiming #340

Flow

watchlist size distribution #367

Zero

impact of 7/9 deployment #364

Research

local edit activity in Wikipedia #381

Community

decline of Italian Wikipedia #431
usage of Aragonese Wikipedia #376

Team process

🟢 Horizontal integration with other researchers: *completed*

- set up joint standups and weekly research group

🟡 Finetune operating model: *in progress*

- revised and socialized new engagement model for R&D
- worked on a proposal to re-scope R&D

🔴 Uplevel team process: *on hold*

- suffering from lack of scrum master / project management support

Formal collaborations / hiring

- Onboard F/T Fundraising Research Analyst
 - *completed*
- Morten Warncke-Wang on task recommendations
 - *started* (volunteer agreement/NDA filed)
- Los Alamos National Laboratory on PV aggregation/anonymization
 - *on hold* because of legal and operational issues
- Opening of traffic research analyst position
 - *on hold*, conditional on review of Product needs; no capacity for hiring in Q1

Outreach

Wikimania '14

- 8 sessions in the main conference track
- WikiResearch hackathon
- [WikiProject Medicine assessment](#), [Public event standardization](#), [Live demos](#), [Quarry querying service](#)
- spin-off projects [Medicine Translation Taskforce](#), [Wikipedia Stub Bot](#)

Talks

- Oxford Internet Institute (UK)
- INRIA (FR)
- WMDE (DE)
- ISI Foundation (IT)
- DensityDesign Lab (IT)
- University of Minnesota (US)
- University of Michigan (US)

Showcase

- hosted [2 research showcases](#) with 4 talks

Paper collaborations

- presented *OpenSym '14* paper ([WP article review](#))
- revised and accepted *CSCW '15* paper ([Moodbar](#))
- submitted 2 *CHI '15* papers (geodata analysis)

Q2 goals

Proposed Q2 goals: Overview

Strategic research

- conduct groundwork on strategic research questions, subject to prioritization
- prototype APIs / data services to support internal and external research

Product support

- support Product teams via consulting and self-service infrastructure
- discontinue “embedded” model

Collaborations

- scale up collaborations with community/external researchers to increase research scope and throughput

Proposed Q2 goals: Strategic research

Understanding reader behavior

Detecting knowledge gaps

Value-based measurements

Mobile micro-contributions

Fundraising experimental strategy

(see [Appendix](#))

Proposed Q2 goals: Data services

A/B testing infrastructure (primary goal)

provide functional requirements

Public data sources (secondary goal)

revert metadata, page creation log

Prototyped labs tools (stretch goal)

article quality classifier, revision scoring, topic classifier

Proposed Q2 goals: Product support

Design and test consulting model (primary goal)

- allow R&D team to allocate resources more flexibly
- identify high impact research opportunities from under-resourced teams
- socialize self-service / reporting infrastructure with Analytics Dev

Hire (primary goal)

- hire traffic research analyst with industry experience
- hire and onboard scrum master

Proposed Q2 goals: Collaborations and outreach

Formal collaborations (primary goal)

unblock formal collaborations stalled in Q1

IEG advising (secondary goal)

advise IEG for grants focused on research and technology

[wikibrain](#) ; [notability modeling](#) ; [editor interaction](#) ; [revscoring](#)

Outreach (stretch goal)

Kick off research collaborations with Oxford, Stanford, Princeton, GroupLens, Northeastern, INRIA

Wiki quality hackathon @ GROUP'14; Wiki research panel @ NCA'14

Staffing outlook

Team growth



Erik Zachte



Aaron Halfaker



Oliver Keyes



Scrum Master



Dario Taraborelli



Leila Zia



Ellery Wulczyn

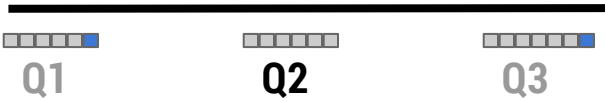


Traffic research analyst

2014



2015



Appendix

Strategic research: Understanding reader behavior

Reader behavior metrics

Vetted page view definition applicable to all access methods

Work out a proposal and privacy implications of unique client implementation

A robust and standardised way of identifying reader sessions

Research on traffic sources

Analyze where readers come from (referral analysis)

Reader rhythms and behavioural patterns

Understand how people access Wikimedia projects as a function of {connection classes, device types, times-of-day}.

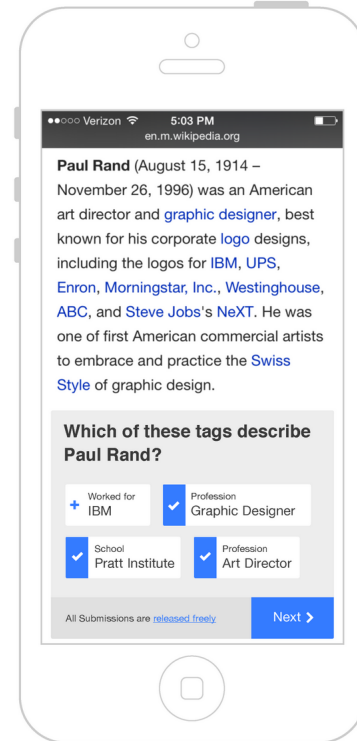
Strategic research: Mobile micro-contributions

WikiGrok

Rollout and test strategy for WikiGrok

Hybrid contributions

Use cases, impact theory and technical requirements for other types of micro- or hybrid contribution



Strategic research: Value-added measurements

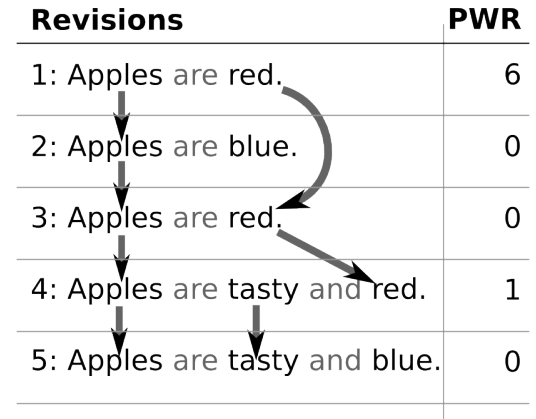
Definitions of value-added metrics

Vetted metric definitions of productivity, quality and importance of contribution

Fundamental research

“Who writes Wikipedia?” has been a persistent question. We’ll aim to answer it.

Revisions	PWR
1: Apples are red.	6
2: Apples are blue.	0
3: Apples are red.	0
4: Apples are tasty and red.	1
5: Apples are tasty and blue.	0



Strategic research: Fundraising experimental strategy

Robust statistical testing A/B

Incorporate a statistical test for which banner is the winner in an A/B test. Let user control the probability of making the wrong decision as a function of effect size.

Fraud detection

Learn weights and threshold for current fraud score to optimize cost from false blocking of a valid donation and charge-backs

Strategic research: Detecting knowledge gaps

Build a hierarchical topic classification of WP articles

Identify asymmetries in coverage between specific Wikipedia language editions

Identifying knowledge gaps based on user need analysis
(search volume, redlink traffic, inbound links)