

Quarterly review

Discovery

Q1 - 2015/16

Approximate team size during this quarter: ... 12 FTE
Time spent: strengthen 40%, focus 40%, experiment 20%

Key performance indicators

User satisfaction	Start Q1: --	End Q1: 15%	-- YoY
Zero Results Rate	Start Q1: 33%	End Q1: 33%	-- YoY

Q1 - Discovery

Objective: Reduce zero results rate



Objective	Measure of success	Status
<p>Enhance the experience for our users that search by reducing the number of queries that return zero results.</p> <p><i>Team members involved: 7</i></p>	<p>Zero results rate cut in half, from 25% to 12.5%.</p> <p>No decrease in user clickthrough rate from search results.</p>	<p><u>Zero results rate</u> unchanged.</p> <p>Actual human zero results rate is around 12% for full text search, and 33% for prefix search. (<u>research</u>)</p>

- Automata, like crawlers, spiders and Wikimedia bots, account for sometimes up to 30% of total search traffic with up to 80% zero results rate, and fluctuate wildly. (research)
 - **Action:** need to represent this on our dashboard. Better infrastructure is needed. (task)
- Created A/B test infrastructure and ran around five tests on search parameters; none were better than the defaults.
- We're trying something more radical: a complete replacement for prefix search. Work still ongoing, as the new system needs a lot of validation that it supports existing use cases.

Q1 - Discovery

Objective: Production beta of Wikidata Query Service



Objective	Measure of success	Status
<p>Allow users on our cluster to run arbitrary queries on the data contained in Wikidata by deploying the Wikidata Query Service.</p> <p><i>Team members involved: 3</i></p>	<p>Wikidata Query Service is deployed and usable from within our cluster.</p> <p>Wikidata Query Service keeps with Wikidata update stream.</p> <p>Define metrics and KPIs for service.</p> <p>Display metrics and KPIs on Discovery Department dashboard.</p>	<p>Launched 7th Sept 2015.</p>

- Usage is ~1000 SPARQL queries per day.
- What we do next is dependent on usage metrics and user input.

Q1 - Discovery

Objective: Production beta of Maps Tile Service



Objective	Measure of success	Status
<p>Allow users on our cluster to build features using maps by deploying a Maps Tile Service.</p> <p><i>Team members involved: 5</i></p>	<p>Wikimedia Maps Tile Service is deployed and usable from within our cluster.</p> <p>Define metrics and KPIs for service.</p> <p>Display metrics and KPIs on Discovery Department dashboard.</p>	<p>Launched 17th Sept 2015.</p>

- Usage is on [our dashboards](#).
- What we do next is dependent on usage metrics and user input.

Q1 - Discovery

Objective: Quantitative search satisfaction KPI



Objective	Measure of success	Status
<p>Further our understanding of whether our search is giving our users relevant results by finding, implementing, and deploying a quantitative metric to measure user satisfaction with search.</p> <p><i>Team members involved: 4</i></p>	<p>Define and communicate search satisfaction metric.</p> <p>Implement data collection to measure metric in production.</p> <p>Visualise metric on Discovery Department dashboard.</p> <p>Iterate until metric can be used as a KPI for Discovery Department in Q2 2015-16.</p>	<p>Launched on 30th Sept 2015.</p>

- **Success:** [Public dashboarding](#) has been a big success, very positively received.
- **Learn:** Metric needs qualitative validation and testing for further iteration.
- **People:** Oliver and Mikhail have trained other teams and organisations on analysis and dashboarding.

Q1 - Discovery

Other successes and misses

- **Success:** Analysts Oliver Keyes and Mikhail Popov, have allowed to us critically evaluate our features (API usage and Zero-Results KPI).
- **Success:** Building A/B testing infrastructure into CirrusSearch has proved very useful. Our A/B testing process has been validated, iterated on and streamlined.
- **Success:** Planned release dates for Wikidata Query Service (Stas Malyshev) and Maps (Yuri Astrakhan, Max Semenik) services were completed on time.
- **Success:** Community visibility - Clear understanding of what goals we hit and what goals we miss because of public dashboarding. Clear announcements of goal planning and releases.
- **Success:** Research conducted - [Data Analytics: Measuring User Satisfaction](#) by Oliver Keyes
- **Success:** Research conducted - [Engineering research spike on zero queries](#) by Trey Jones
- **Success:** Research conducted - [Are we failing our users when they search Wikipedia?](#) by Dan Garry and Moiz Syed
- **Success:** Research conducted - [Wikipedia.org review](#) by Oliver Keyes
- **Success:** Research conducted - [Reducing Zero Result Searches Through Elasticsearch](#) by Mikhail Popov
- **Misses:** We need to account for bot traffic in analysis on dashboards as they greatly skew true understanding.
- **Misses:** Better assessment of KPI goals relative to bots.
- **Misses:** Cadence of A/B testing could be increased.

Q1 - Discovery

Category	Workflow	Comments	Type
ElasticSearch maintenance	ElasticSearch upgrades	Constant improvement to keep core software on latest version. 1.3 -> 1.6	M
	Multi-datacenter work	Planning and prep work for support of operations team.	M
	Removal of dynamic scripting	Security in depth improvements.	M

Type: new, reactive, maintenance

Q1 - Discovery

Category	Workflow	Comments	Type
wikipedia.org	Git/Gerrit migration for www.wikipedia.org	Planning and community discussion on investigation of new methods for development.	N
	Mockups for the future of the knowledge engine	We took on early mockup development a few weeks prior to planned work in Q2.	N
	Community engagement and surveys	Conducting surveys and discussions to build for q2 work.	N

Q1 - Discovery

Core workflows and metrics

Category	Workflow	Comments	Type
Operational	Onboarding and hiring	We have completed hire expectations for the quarter as planned.	N
	Traffic analysis work done for Legal Team, Executive Director, Board of Trustees	We took on a few extra cycles of data analysis tasks to support wider foundation goals beyond team.	R
	Training Wikimedia Germany on dashboarding for Wikidata, product support for Wikidata team	We were able to provide an extra layer of support to the Wikidata team to start building towards data understanding of the project.	N
	Fundraising and grants support	Team effort and extra cycles spent for planning and building grant requests.	N
	Kafka/Avro work	Pipeline for high-throughput data recording (e.g. for analysis and breakdown of bot traffic) - supporting our own work and also Reading Department.	N