Metrics: When one size doesn’t fit all

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Repositories on GitHub: 350+
Contributors worldwide: 2,000+
Stars on GitHub: 117K+
Community projects:
- Jaeger
- Horovod
- Pyro
- Apache Hudi
- Kepler.gl

5 of the top open source projects on InfoWorld's awards list.
High level metrics from Uber’s Open Source program

350+ Repositories on GitHub
2,000+ Contributors worldwide
117K+ Stars on GitHub. Average 365 per repository

5 Community projects: Jaeger, Horovod, Pyro, Apache Hudi, Kepler.gl

Open Sourced one project every week since 2012!

2 of the top open projects on InfoWorld’s awards list
Should we care about project metrics?
Absolutely!

There are at least a few good reasons:

- Open sourcing a project is just as much a business decision as an engineering decision. We must be able to prove the value.
- Decisions should always be made based on facts - and facts are a product of metrics and analytics.
- The insights we can gain from metrics can make us better project maintainers.
Data, data, data
Without data, you are just another person with an opinion

W. Edwards Deming
If we cast our net wide, we will probably get a lot of useful data...
We can capture all kinds of data
With Bitergia Analytics, we can even look at all the data.
But what do we do with all that data?
Data, data, data

“Strategy without tactics is the slowest route to victory.
Tactics without strategy is the noise before defeat.

Sun Tzu
Examples of relevant questions to seek answers to:

- How does the project do?
- What is the project’s value?
- How big is the project community?
- Should we continue developing it?
- How can we improve the project?
Initial Learnings
Initial learnings

Working with Uber’s Open Source project metrics has shown a clear trend.

All projects cannot be treated the same way. We have to ask different questions for projects that are in different stages of their lives.
Projects have different maturity levels, and if we use the same metrics to assess their success, we will typically not get the right picture of less mature projects.
Initial learnings

New Project
- Issues
- Clones
- Stars

Mature Project
- Pull Request
- Engagement
- Contributors
- Mailman
- Groups.io
- G Groups
While popularity metrics like stars may not have much value for mature projects, it’s a good indicator of interest in newer projects.

Another good indicator for newer projects is how many times developers have tested the project - measured in clones, installs etc.
Projects in later stages of their lives are expected to have more contributions, and a lot of the metrics we are interested are centered around contributions.

We look not only the quantity of contributions, but also the demographics and level of the contributor engagement.
Initial Learnings

In the early stages of an open source project’s life, we want to look for **intend** to adopt, engage and contribute.

In later stages we want to see action.
The path to reporting metrics
The path to reporting metrics

- Strategy
- Analytics
- Customization
- Reporting
Strategy

The goals defined by OSPO. Examples could be:

- Collaboration
- Attract talent
- Gain influence
- Give back
- Foster OSS participation
Analysis

Define the questions you want answered.

- Where are contributors coming from?
- How much engagement do my projects get?
- How many core, regular, and casual contributors do my projects have?
- How quickly are we handling external contributions?
- What is the company’s OSS footprint?
- What is contributors path in our projects?
Customization

Identifying the sources of insights

- +30 data sources supported
- Predefined and customizable dashboards
- Contributors identity information management
- Rest API for data consumption
- 100% free, open source software

GrimoireLab
chaoss.github.io/grimoirelab
Reporting

Where contributors are coming from?
The path to reporting metrics

Reporting

How much engagement do my projects get?
How much engagement do my projects get?
How many core, regular and casual contributors do I have?
How fast am I dealing with external contributions?
What’s the company’s OSS footprint? (WIP)
The path to reporting metrics

Reporting

What is contributors path in our projects? (WIP)

Users
- External people asking questions

Contributors
- External people answering questions
- External people submitting patches

Maintainers
- External people committing code
Recap
Recap

● Data is almost unlimited; the art is to be selective about what to measure
● Metrics should always answer questions relevant for both the project and the business
● Use metrics to gain insights; metrics without context are not useful
● Open source projects go through different life stages and should be evaluated against goals appropriate for the current stage
Thank you

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