Defining a Metrics Strategy

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Retrieve, massage, visualize

More at bitergia.com/customers
Datasets are everywhere

Overwhelming task

What’s the right metric to use?
GrimoireLab data sources

Source Code Management
- Git, Baazar(*), Mercurial(*) (*exporting to git)

Issues / Tasks Management
- Bugzilla, GitHub Issues, JIRA, Manifhest, Redmine

Source Code Review
- Gerrit, GitHub Pull Requests

Mailing lists / Forums
- Askbot, Discourse, Gmane, Hyperkitty, mbox files, NNTP, Pipermail, Stack Exchange

Continuous Integration
- Jenkins

Synchronous Conferencing
- IRC (Supybot), Slack, Telegram

Wikis
- Confluence, MediaWiki

Meetings Management
- Meetup

Others
- RSS
Why?
Why?

Why do we need metrics?
Why do we need metrics?

Awareness
Why do we need metrics?

Awareness

Lead a change
Why do we need metrics?

Awareness

Lead a change

Motivational
In Inner Source we may face any of those three stages at any point in our trip.
What?
What?

What can we measure?
What can we measure?

Activity
What can we measure?

Activity

Community
What can we measure?

Activity

Community

Process
What can we measure?

Activity

Community

Process

Code Bitergia
How?
How?

How can we measure?
<table>
<thead>
<tr>
<th><strong>How</strong> can we measure?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Method</strong></td>
</tr>
<tr>
<td>Goal Question Metric</td>
</tr>
<tr>
<td>Approach</td>
</tr>
<tr>
<td>Objective and Key</td>
</tr>
<tr>
<td>Results</td>
</tr>
</tbody>
</table>
How can we measure?

Method

Documentation
Documentation
Documentation
Documentation
Documentation
How can we measure?

Method

Strategy
How can we measure?

**Method**
- C-level

**Strategy**
- Middle management
- Contributors
How can we measure?

Method

Strategy

For how long is a metric useful? => link to goals
How can we measure?

**Method**
For how long is a metric useful? => link to goals

**Strategy**
For how long is a goal useful?
How can we measure?

Method

Strategy

Infra

Bitergia
When?
When?

When do we start?
When do we start?

Mature Org

Transparency

Aligned Interests

Bitergia
Bonus
Bonus: Gitbook

GitBook/GitHub (CC-BY-SA)

Looking for public use cases

Please take a copy!
Bonus: Gitbook
Bonus: Inner Source Patterns

Those related to metrics
https://github.com/paypal/InnerSourcePatterns

We’ll see a great talk later about this
Bonus: Inner Source Commons

*The place to be*
http://paypal.github.io/InnerSourceCommons/

*Great working group environment*

*Useful insights*
Summary
Decisions based on data!
Defining a Metrics Strategy

[Booth #429]

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Use Cases
Use case

Mentorship

Helping newcomers

Eg: Who are those helping others to understand the current product?

Eg: Who are the newcomers? How fast are newcomers becoming mentors?
Use case

Attraction of developers and companies

Marketing, transparency and neutrality

Eg: *who are the relevant members of this community?*
Use case

Development cycle

From user stories to deployment

*Eg: How fast are we implementing requirements?*

*Eg: How long does it take each of the phases of the development?*

Feature request -> backlog -> developing -> reviewing process -> CI -> entering into master -> more CI -> deployed in customer
Use case

Engagement

Attraction and retention of new members

Eg: How good are we retaining developers? And compared to others?
Use case

Contributors funnel

From first traces to core developer

Eg: What % of basic contributors are actual developers nowadays?

Eg: First traces: bug report, email, feature need -> first pull request -> first accepted pull request -> active in the project/repository
Use case

Social Network Analysis

Knowledge evolution

Eg: From hidden knowledge to shared knowledge

Eg: Who’s this developer working with? Areas of knowledge?
Lessons learned: starting

Building dashboards and fitting this to requirements take time
Lessons learned: starting

Really understand the process

You say you follow a process, but is it 100% true?
Lessons learned: define goals

First stage goals are different from mature goals

Initially: understand and check

Then: new questions and definitions of KPIs

Finally: definition of alerts and actions
Lessons learned: infrastructure

Infrastructure is similar in most of the OSS projects

Even when they use different tools (mailing lists vs Gerrit)

Although some tools help a lot
Lessons learned: inner source

It’s feasible to bring that experience and toolchain to the inner source world.

Metrics are similar but with different purposes.
Lessons learned: cultural issues

Metrics may lead to undesired situations

People don’t like to be tracked

Gamification may not be appealing to devs.

Having metrics may change people's behaviour to be good at those metrics
Lessons learned: cultural issues

Try to build comfortable environments when using metrics

Developers should agree that ‘such metric’ is important for the project

Metric projects with community traction are great, those are inclusive
Lessons learned: tooling

Several layers help the ‘Inner Source Team’

Data API -> Data Scientists

Q reports -> Management

Code Review panels -> Developers

Demographics panel -> Recruiting
Lessons learned: tooling

Whatever you use (Dashboard, reports, ...) try to involve your community!

They’ll feel it’s part of their process

They’ll help improving that tooling (inner source project)

It’s all about transparency and data driven