



# Finding the Order in the CHAOS(S) of Metrics: Are We There Yet?

And further questions :)

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# Metrics and I



@hugh

# Metrics and I

Good grades  
Computer Science degree  
IT job  
Reasonable salary  
Traveling the world  
well, I mean flying a lot, I mean a LOT



IT profession  
was the right  
choice(?)

90/60 blood pressure



I'm an unhealthy  
person(?)



# Metrics and corporations





And then in a team-chat yesterday

I  Data



# Metrics and corporations



HOW MUCH  
IS  
ENOUGH

Is the game(ing) over?



**GAME  
OVER**

# Metrics and open source ecosystem



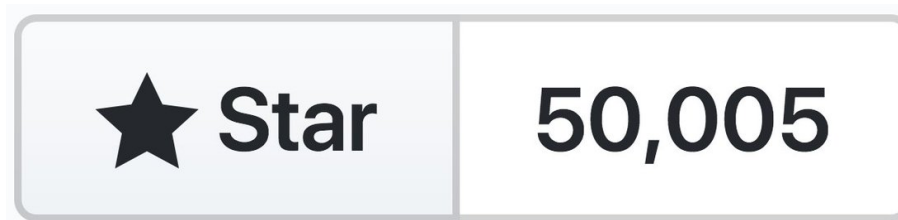
# So what's up with GitHub (stars)? - in other words, tools vs metrics



“If your project is not on GitHub it’s not open source”

“Your project is not in the top based on GitHub stars; why should I care?”

“Is contribution equal to PRs (pull requests) and issues?”



(P.s. Octocat is awesome!!)



# CHAOSS Mission



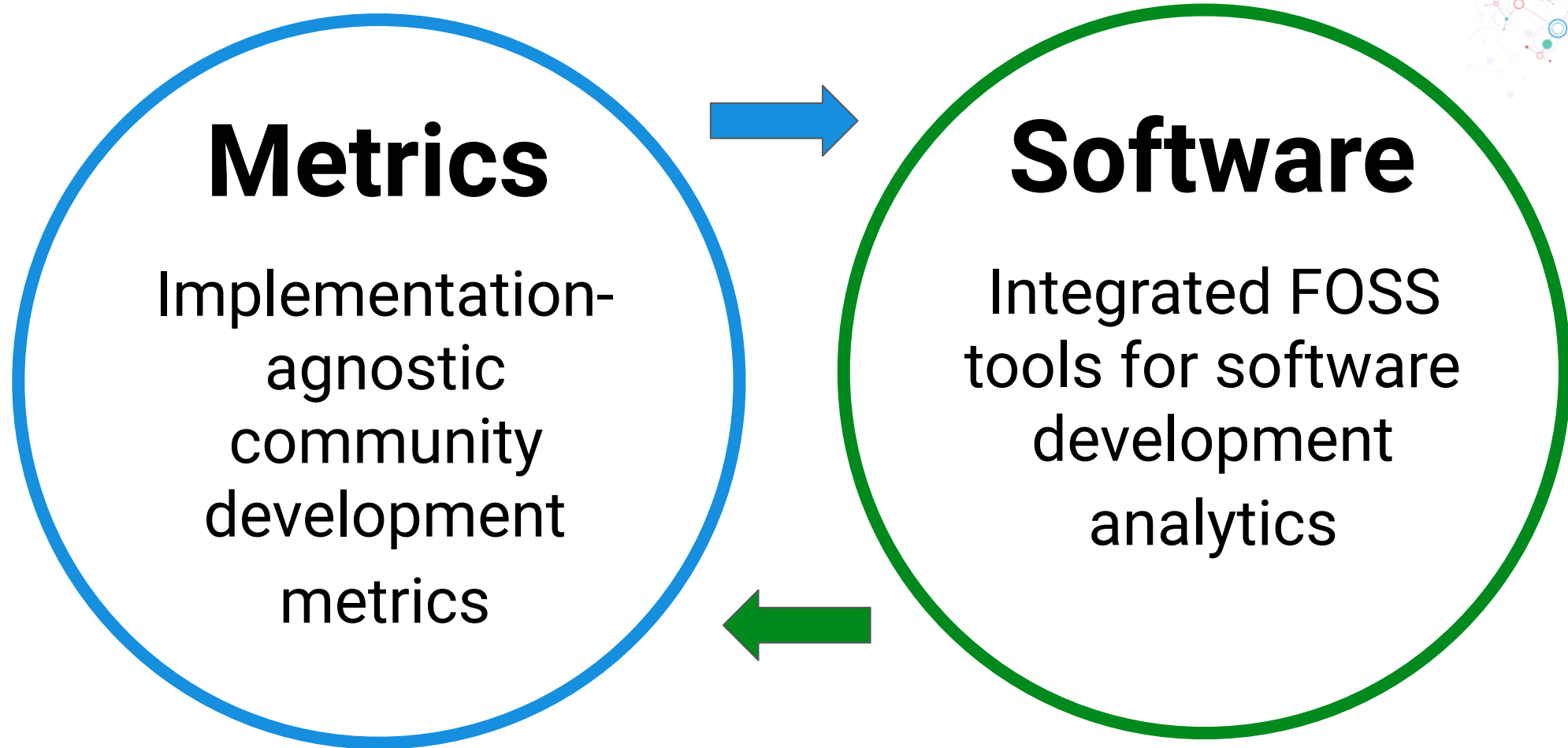
1. *Produce integrated, open source software for analyzing software development, and definition of standards and models used in that software in specific use cases;*
2. *establish implementation-agnostic metrics for measuring community activity, contributions, and health; and*
3. *optionally produce standardized metric exchange formats, detailed use cases, models, or recommendations to analyze specific issues in the industry/OSS world.*

# CHAOSS Goals



- 1. Establish standard implementation-agnostic metrics for measuring community activity, contributions, and health*
- 2. Produce integrated open source software for analyzing software community development*
- 3. Build reproducible project health reports/containers*

# Structure: Focus Around Interests





# Metrics



***Diversity and Inclusion*** are known to challenge unchecked assumptions and lead to more open and fair collaboration practices.

An OSS community has states: ***Growth, Maturity, and Decline***. The state that a community is in may prove important when evaluating both across and within community concerns.

The ***Risk*** metric informs how much risk an OSS community might pose. The evaluation of risk depends on situation and purpose.

Many OSS communities rely on and are used in other open source software, creating ***Dependencies*** throughout an OSS ecosystem.

Developers and organizations capture ***Value*** from engaging in OSS communities. This set of metrics can inform what this value is.



# Working Groups



# Growth, Maturity and Decline (GMD)



**Process (under test)**

Focus area



Goal

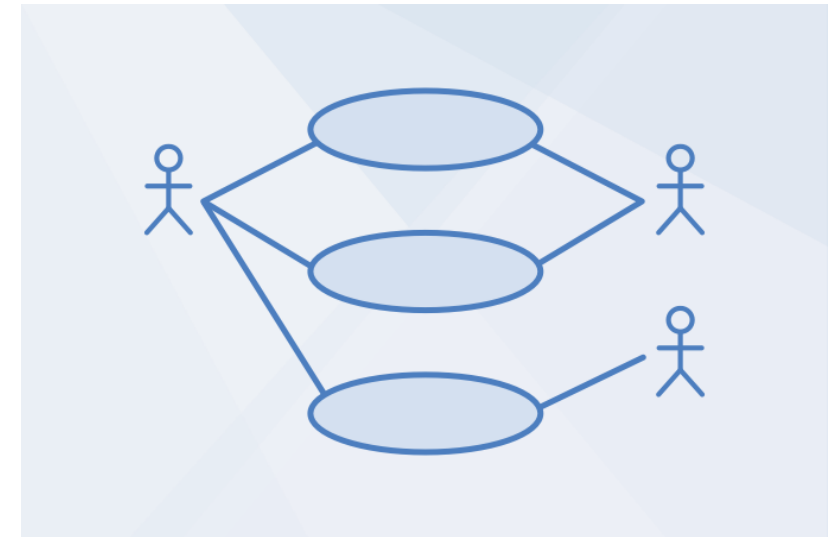


Question



Metric

**Use cases**



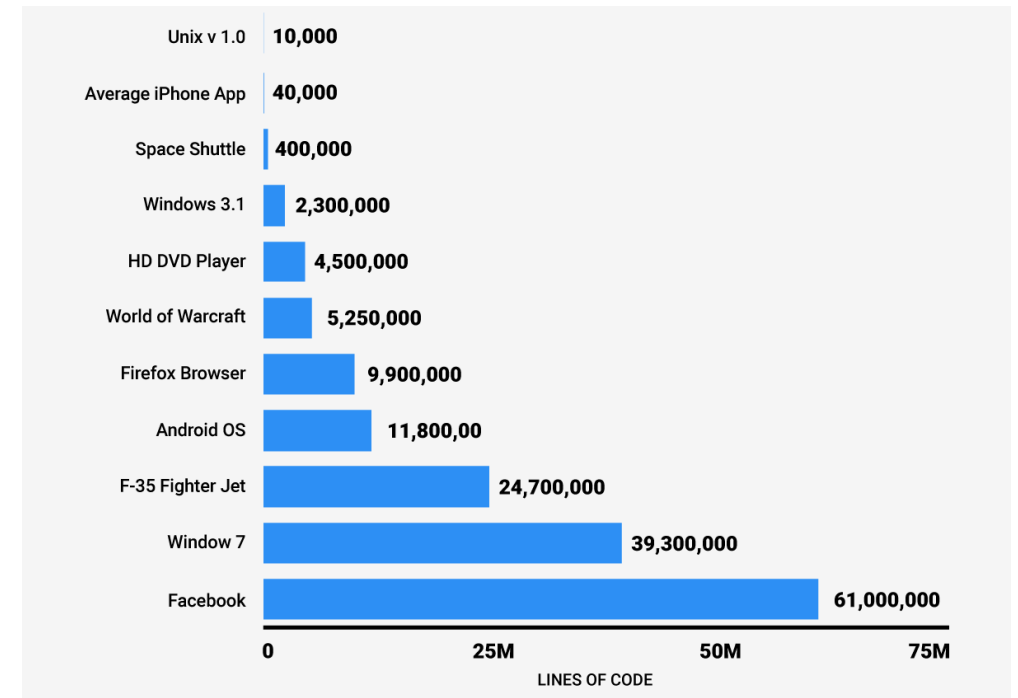
# Growth, Maturity and Decline (GMD)



## Focus areas

- Code development
- Community growth
- Issue resolution
- Risk
- Value

<https://github.com/chaoss/wg-gmd>



# Diversity and Inclusion (D&I)



# Diversity and Inclusion (D&I)

## Focus areas

- Event diversity
- Contributor community diversity
- Communication inclusivity
- Recognition of good work
- Leadership
- Governance
- Project places



<https://github.com/chaoss/wg-diversity-inclusion>







# Software

# Software Committee

## Implement Reference in Open Source

- Develop a FLOSS reference implementation of defined metrics.
- Integrate GrimoireLab, GHData, Prospector, and cregit into an Open Source Collaborative Framework
- Develop a better understanding of how contributions happen to large projects over time.
- <https://chaoss.community/software/>

CHA<sup>OSS</sup>



**GHData**

**Prospector**

**cregit**

# Live Examples to Explore

GrimoireLab:

[opnfv.biterg.io](https://opnfv.biterg.io)

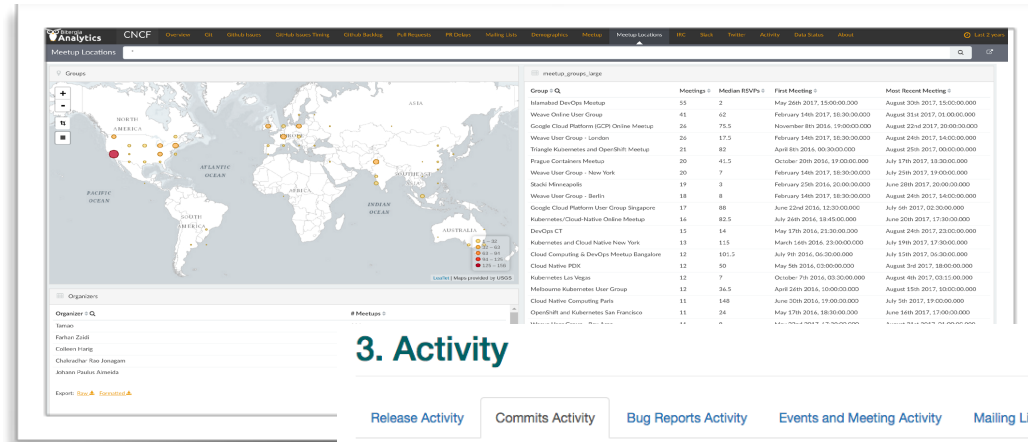
[cauldron.io](https://cauldron.io)

Prospector:

[prospector.bitergia.net](https://prospector.bitergia.net)

Cregit:

[cregit.linuxsources.org](https://cregit.linuxsources.org)

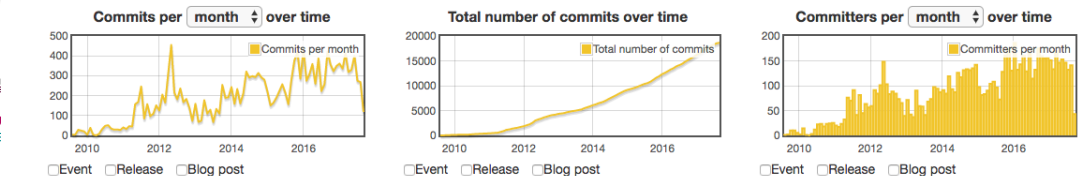


```
cpu_notifier_regist
if (create_hash_tabl
err = -ENOMEM
goto out;
}

entry = proc_create
goto out;
if (!entry)
proc_set_size(entry,
_hotcpu_notifier(p
out:
cpu_notifier_register_done();
return err;
}
```

Contributors

william lee irvin iii	william lee irvin iii	58	58.00%
srivatsa s. bhat	srivatsa s. bhat	26	26.00%
paolo ciarrocchi	paolo ciarrocchi	5	5.00%
david howells	david howells	4	4.00%
denis v. lunev	denis v. lunev	4	4.00%
al viro	al viro	2	2.00%
dave hansen	dave hansen	1	1.00%



Metric datapoints:

- Percentage of committers by dominant domain name: 37.10%**  
Rationale: If more than 50% of COMMITTERS are from one domain (via email ID) it is dominated by one set of people. Suggested target is to have it less than 35%.
- Percentage of commits by dominant domain name: 57.27%**  
Rule: If more than 50% of CODE COMMITTS are from one domain (via email ID) it is dominated by one set of people. Suggested target is to have it less than 35%.

Join us to extract knowledge from



# CHA<sup>OSS</sup>

[chaoss.community](https://chaoss.community)

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