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# Revitalizing OSS Contributions and Participation across Mozilla

OSS Summit Europe  
Edinburgh, Oct. 2018

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/us



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@ruphy

Open Source Strategy Lead @Mozilla.  
Former Open Source Project Leader  
@teamdigitaleIT. Founder @WikiToLearn.  
Physicist. Entrepreneur. Free knowledge  
lover.



**Daniel Izquierdo**

@dizquierdo

@Bitergia co-founder. Open and Inner  
Source advocate. Love data analytics.  
Python developer.

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@ruphy

@dizquierdo

# Mozilla: Champion of Open Source



## Mozilla: Champion of Open Source



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### Mozilla manifesto #3:

*"Free and open source software promotes the development of the Internet as a public resource."*

1900+ repos in GitHub, flagship product has always been developed in the open

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## Mozilla: Champion of Open Source



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- + User support
- + MDN
- + Localization
- + Tech speaking
- + Crowdsourcing
- + Data science
- + ...

# Mozilla: Champion of Open \*

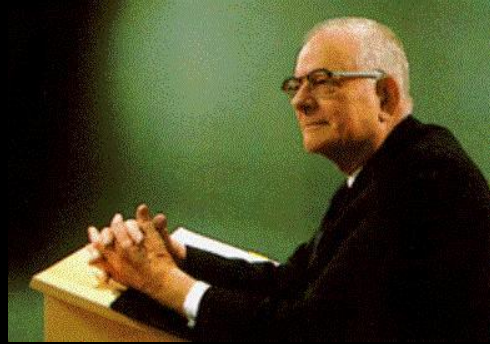


!

# Mozilla: Champion of Open \*



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“Without data, you are just  
another person with an opinion”

[W. Edwards Deming](#)

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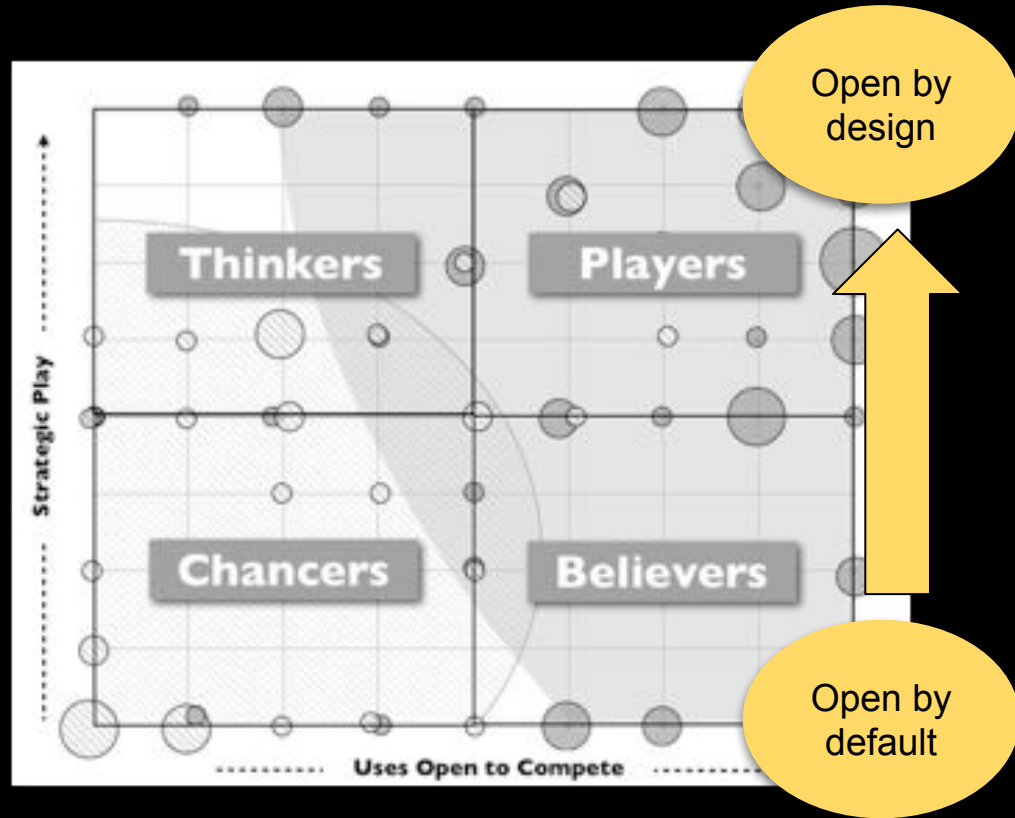




# Mozilla: Champion of Open \*



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**Where to start?**

**What are the right questions?**

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**Awareness.** Help the community: Characterization of the community, volunteers work.



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/initial\_questions

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**Leading a change.** How can we improve our volunteers and community work in certain projects (Servo, Rust, Gecko, Firefox, WebVR)



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**Making decisions.** How do we monitor the progress and the success of the actions?



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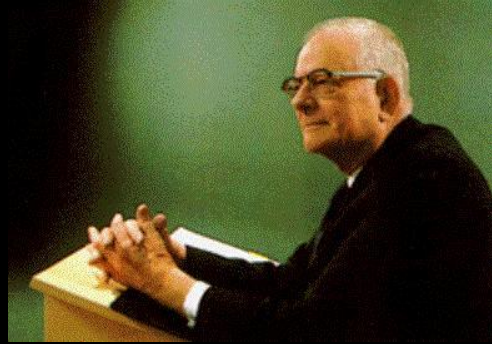
**Awareness**

**Leading a change**

**Making decisions**

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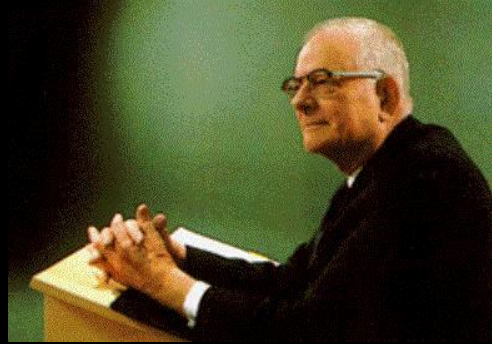




Do you remember me?

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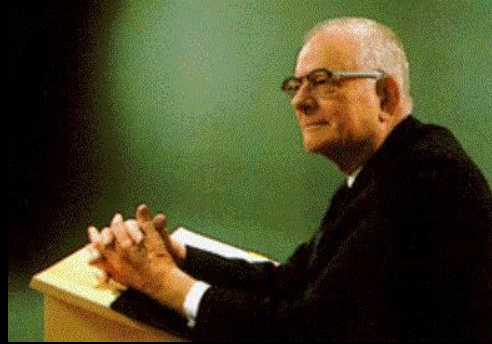


What do we need?

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Data!

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## /data\_sources



### Source Code

Git, Baazar\*, Mercurial\*  
(\*exporting to git)



### Tickets / issues

Bugzilla, GitHub Issues,  
GitLab Issues, JIRA,  
Launchpad, Phabricator  
Maniphest, Redmine



### Code Review

Gerrit, GitHub Pull  
Requests, GitLab Merge  
Requests



### Continuous Integration

Jenkins



### Mailing lists / Forums

Askbot, Discourse, Gmane,  
Hyperkitty, mbox files,  
NNTP, Pipermail, Stack  
Exchange



### Chat

IRC (Supybot), Slack,  
Telegram



### Downloads

Apache http logs



### Wiki

Confluence, MediaWiki



### Meetings

Meetup, Mozilla Reps  
events



### Others

crates.io, Docker Hub, RSS,  
Twitter

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/data

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## **Bitergia Analytics Dashboard (100% OSS)**

**Centralized** place to store all the development and community activity

**Accessible** by anyone under and NDA (we are working to make this more public)

**First step** to produce a proper BI

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/data\_numbers

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## Git

> 5M commits

> 110K contributors

> 3.300 repos grouped

In projects

## Bugzilla

> 1.3M issues

~ 200K contributors

## Stackoverflow

> 7,7K questions

> 5.3K people involved

> 18,5K answers

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**Data since 1990!**

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/useful\_data

# Is that useful to have data since 1990?



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/useful\_data

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**Central** point of metadata about software development

What's your **role**? executive level, middle managers, developers, research, legal, and others

Even more if you're data oriented: context, data scientist, data-driven decisions

Check **existing** policies vs **previous** ones vs **new** ones

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## Version control systems

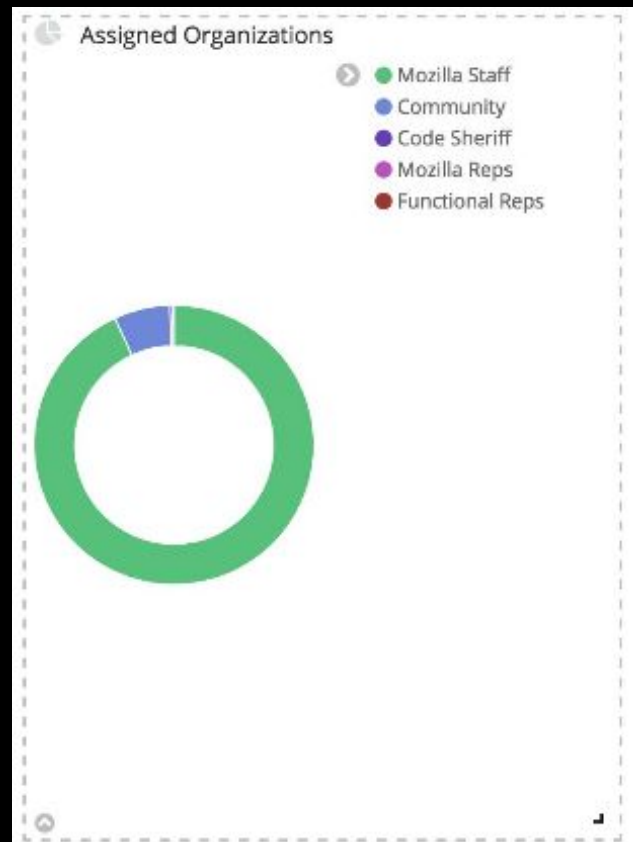
- SVN -> Mercurial -> Git

## Identities management

- D. Izquierdo vs dizquierdo
- Several data sources

## Affiliation issues

## Incremental support



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Based on previous slides at

[http://grimoirelab.github.io/slides/2018-02-02/8\\_CHAOSSCon-MozillaCommunityAnalytics.pdf](http://grimoirelab.github.io/slides/2018-02-02/8_CHAOSSCon-MozillaCommunityAnalytics.pdf)



/first\_steps

Low hanging fruits



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## Awareness!!

Then we know where we are, who we are, what we do



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/first\_steps

## Awareness!!

Then we know where we are, who we are, what we do



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/first\_steps

What about the other metrics?



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/strategy

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Is not worth capturing all of the existing ideas, metrics.

What are the worth palm trees?

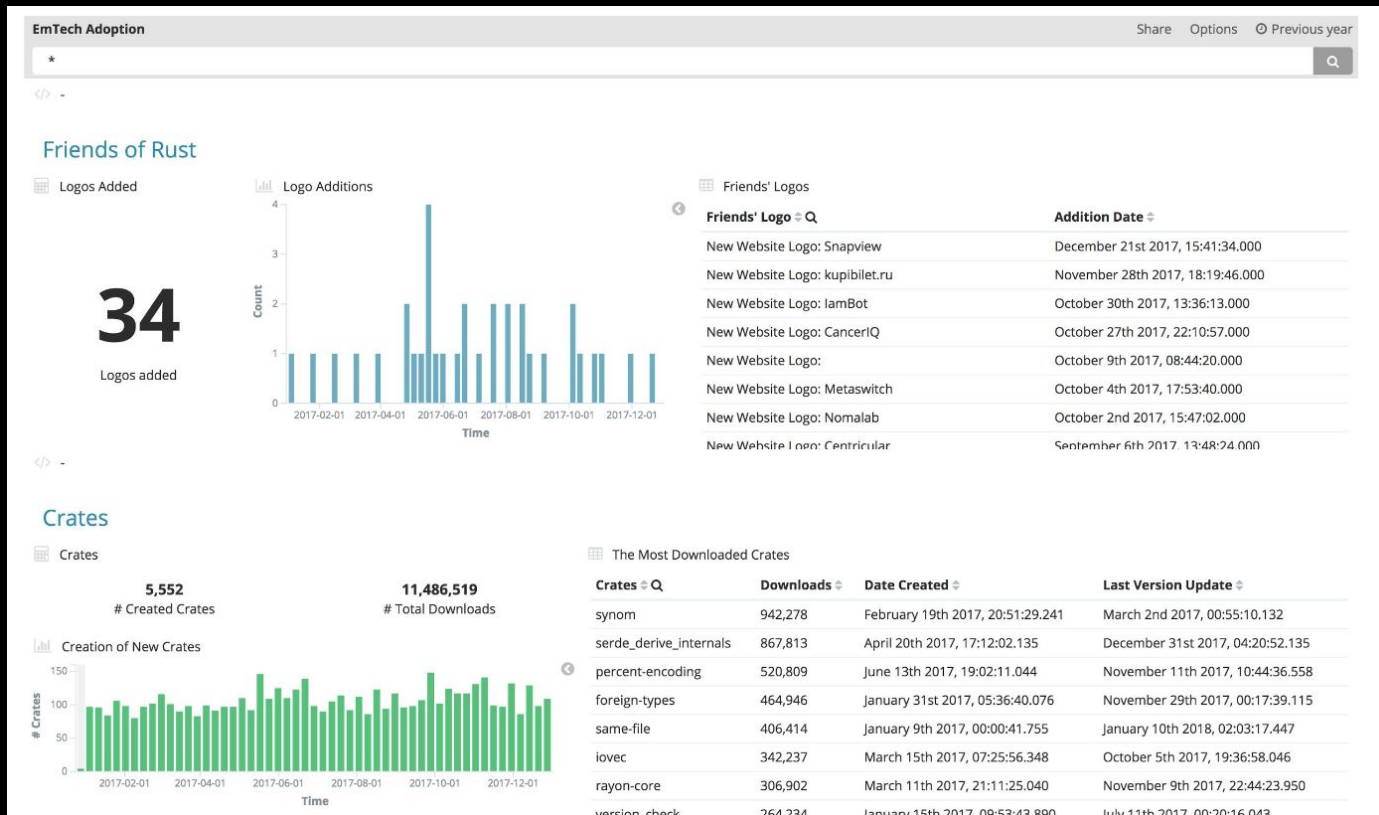
**Method:** Goal - Question - Metric approach

**Strategy:** Plan - do - check - act

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# Rust Adoption



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## Rust General Analytics

## Summary

## Git Summary

**10,098** **648** **2** **1**  
 # Commits # Authors # Repositories # Projects

## GitHub Issues Summary

**4,115** **1,278** **2** **7.59**  
 # Issues # Submitters # Repositories 50th percentile of Median Time to Close in Days

## GitHub PRs Summary

**4,634** **713** **2** **2.46**  
 # Pull Requests # Submitters # Repositories 50th percentile of Median Time to Close in Days

&lt;/&gt;

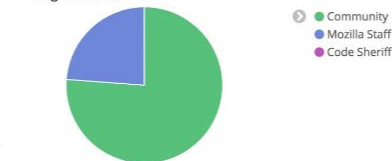
## Projects

Project	# Authors	# Commits
Rust	648	9,990

## Git Domains

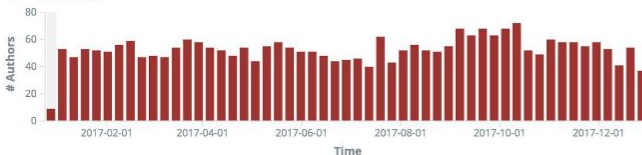
Domain	# Commits
	2,955
gmail.com	2,387
alum.mit.edu	655
alexcrichon.com	619
mozilla.com	548
rwell.org	323
users.noreply.github.com	290
kuber.com.ar	166
steveklabnik.com	139
ncameron.org	133

## Organizations

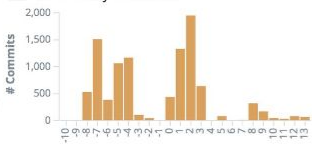


## Git

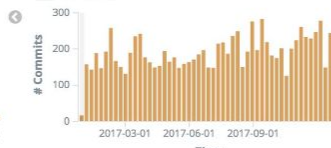
## Git Authors



## Commits by Time Zone



## Commits



## Git Authors

Author	# Commits	Added Lines	Removed Lines
Niko Matsakis	655	52,942	31,972
Alex Crichton	619	57,167	44,986
Oliver Schneider	433	112,191	78,985
Guillaume Gomez	369	17,521	9,200
Ariel Ben-Yehuda	334	30,713	21,776
Corey Farwell	323	8,836	4,700
Ralf Jung	312	12,009	6,345

## Git New Contributors

Developer	Organization	First Commit Date	# Commits
Kagamihime	Community	December 29th 2017, 23:04:21.000	2
Felix Schütt	Community	December	3

## Git Repositories

Repository	# Commits	# Authors
https://github.com/rust-lang/rust.git	9,545	619
https://github.com/rust-	541	84

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Insights were good for a generic open source project, but what about **specific cases**?

A characterization of open source projects help to adequate metrics (and thus resources) to each project

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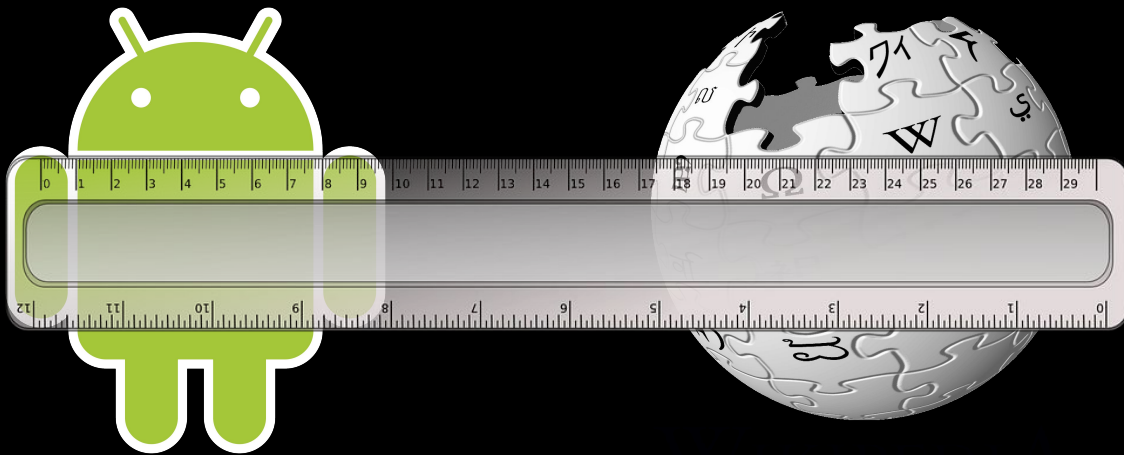
**How can we have this?**

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/dashboard\_usefuln  
ess

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# Would you measure Android and Wikipedia the same way?



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/but

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We don't have any structure nor framework to talk about this

**One *open* size does not fit all!**

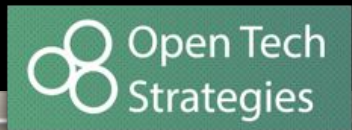
**Let's be real open champions  
and do the work ourselves!**

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/archetypes



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/archetypes/list

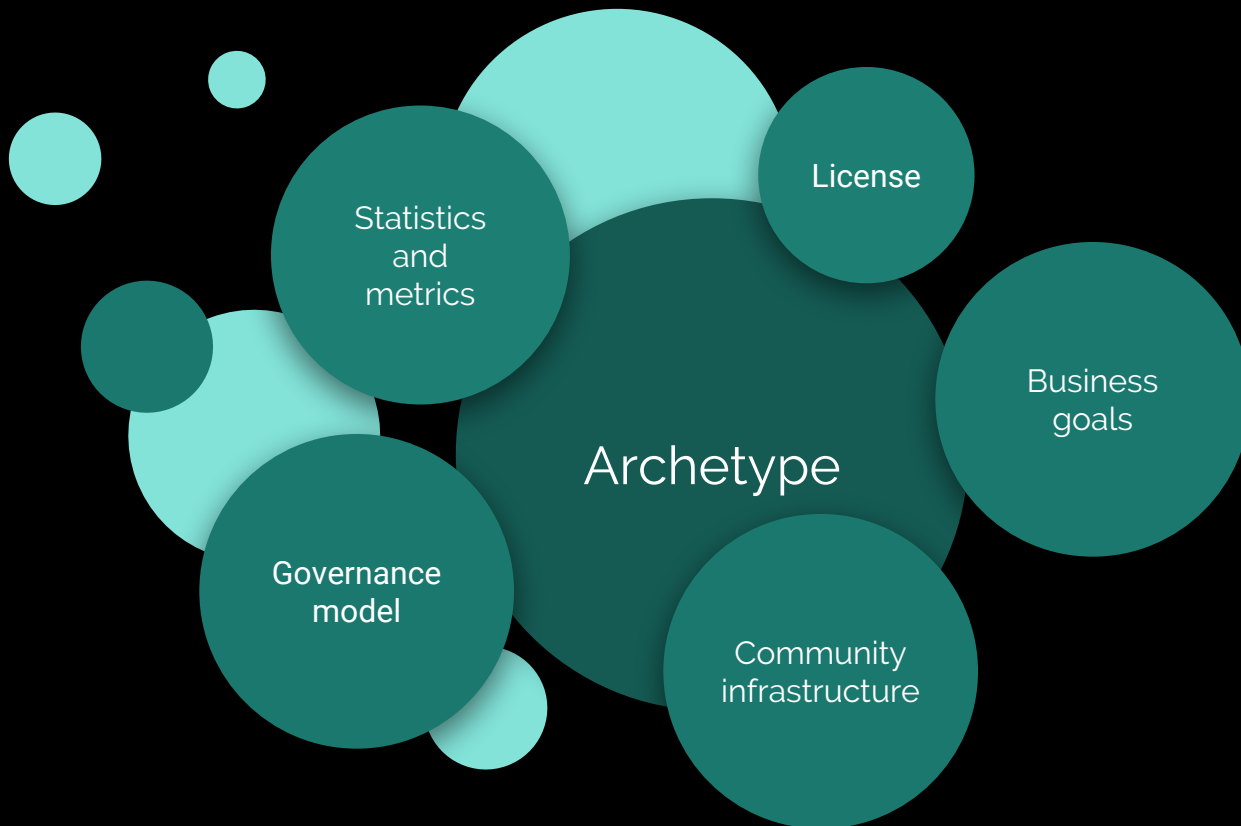


01. Business-to-Business
02. Multi-Vendor Infrastructure
03. Speciality Library
04. Upstream Dependency
05. Trusted Vendor
06. Controlled Ecosystem
07. Rocket Ship To Mars
08. Wide Open
09. Mass Market
10. Bathwater

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/archetypes



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Birth of the project

Version 1.0

World domination

**Rocket ship to Mars**

You just build a small team to have something out, fast

**Trusted vendor**

The software is stable - the core opens up to community participation

**Mass market**

The users community gets huge and takes on most of the work. Contributors are counted in several thousands

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/example/2

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The WebKit Open Source Project

...creates a browser...

...which can only display emoji sets

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**Core product: Controlled ecosystem**

Real community involvement,  
benevolent dictatorship on  
the direction

**Core library: Upstream dependency**

1 You base your product on  
WebKit and attract  
developers to work on it

**Emoji sets: Wide open**

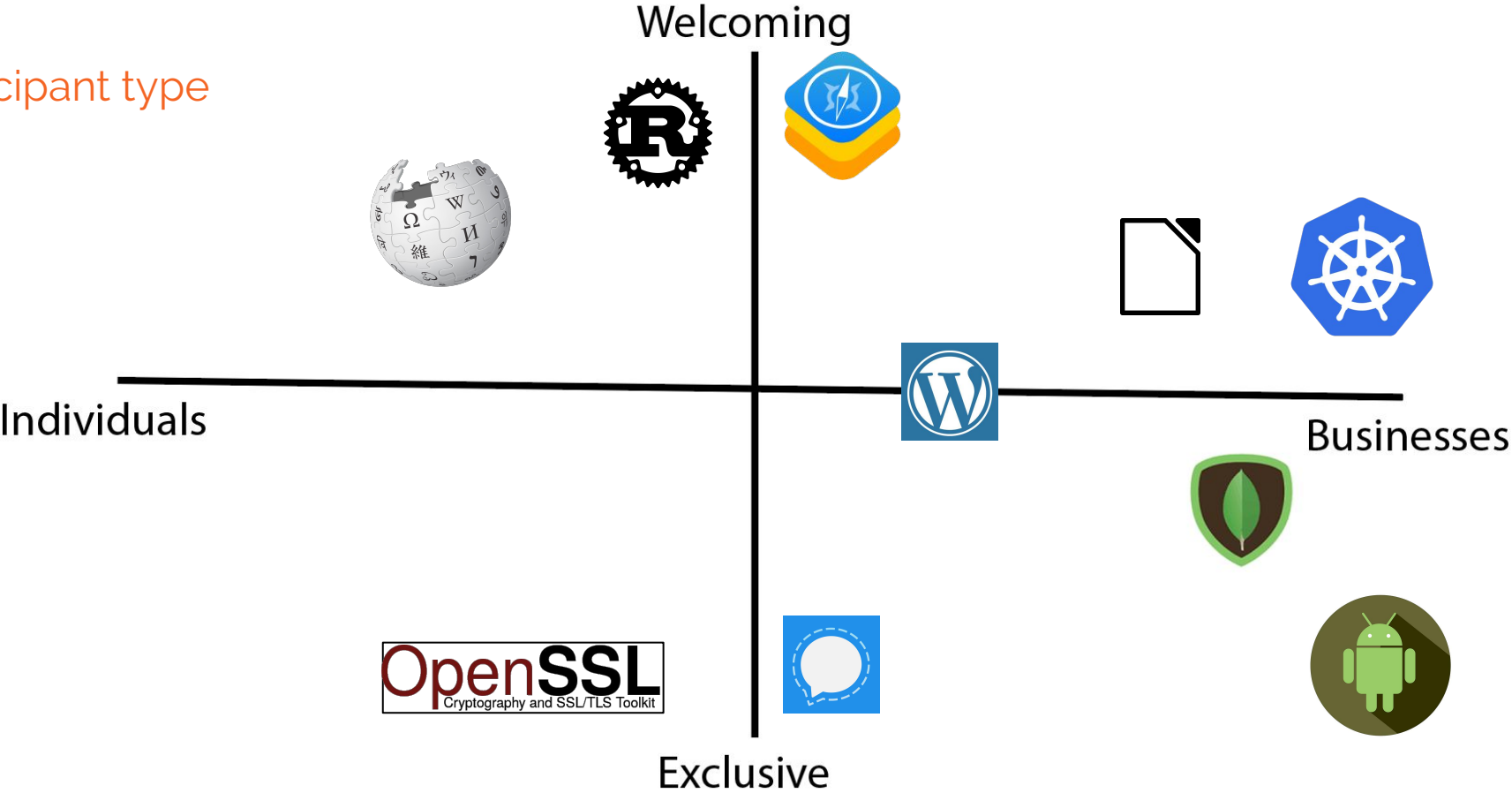
3 Any source in the community  
can provide an emoji set and  
additional modules



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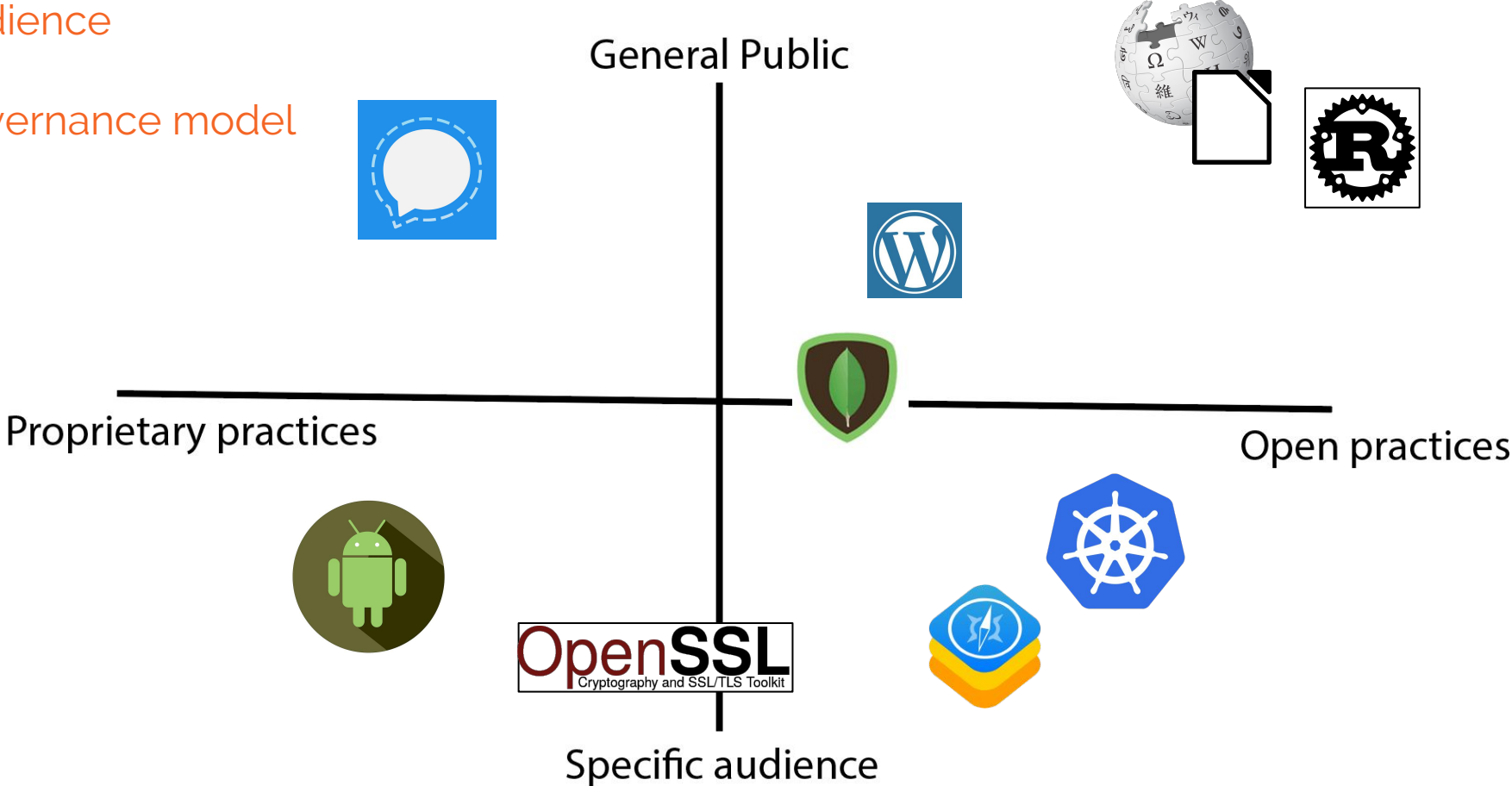


Inclusiveness  
vs.  
Participant type





Audience  
vs.  
Governance model



/further\_work

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Archetypes and data: should we measure all archetypes the same way?

How to keep revitalizing the community

Understand current hot projects for Mozilla (eg RUST)

Further research: what are the next hot projects for Mozilla?

Who can become core developer? How can we facilitate this on boarding process?

Can we improve the retention and attraction of the community?

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/further\_work

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Next milestone: Version 2!

<https://github.com/OpenTechStrategies/open-source-archetypes>

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/vision



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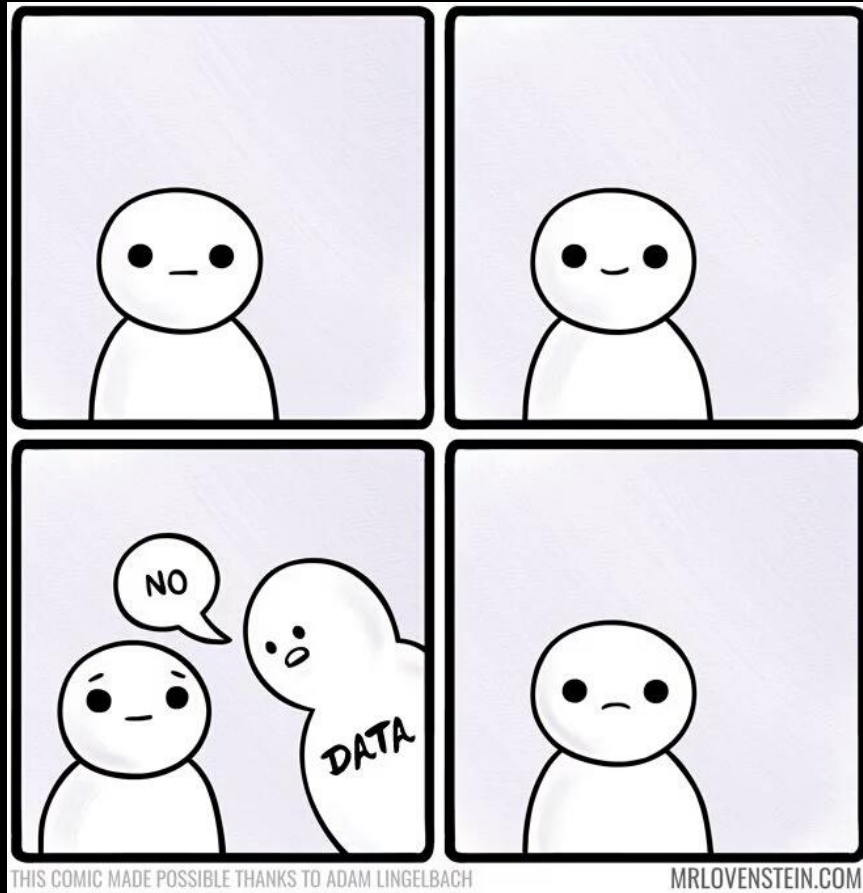


Archetypes v2 and metrics INTEGRATED

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/summary

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/thank\_you

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# Thanks!

<https://mzl.la/archetypes>

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