Running the internet, under-funded and under-staffed?

How to achieve a sustainable open source ecosystem

FrOSCon, August 17 2024 | Jutta Horstmann | CEO, Mailvelope
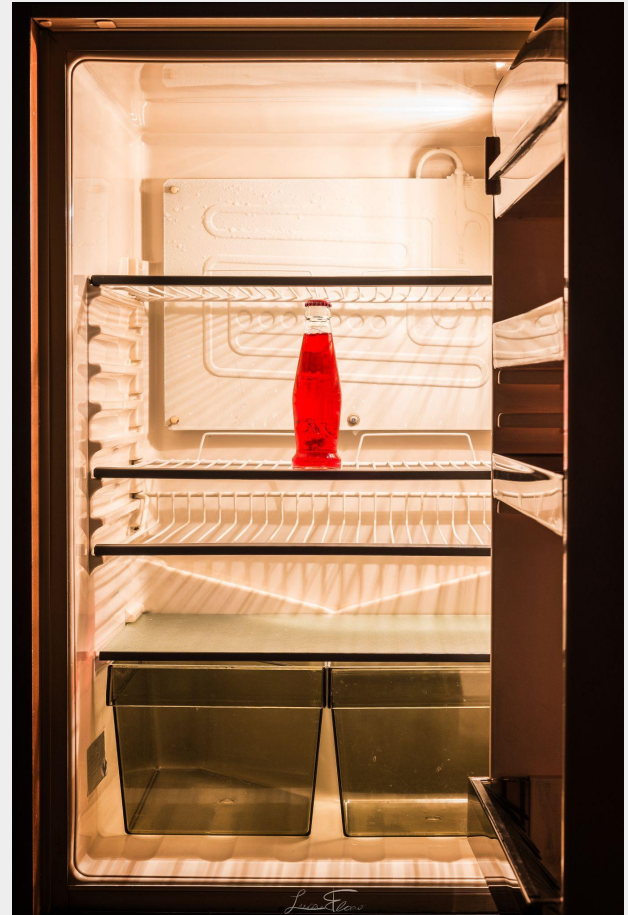
100 FREEDOMS
OF FREE SOFTWARE

001 USE
010 STUDY
011 SHARE
100 IMPROVE

fsfe.org

VS.

Luca Florio, CC BY-SA 2.0, via Wikimedia Commons

Economic Sustainability

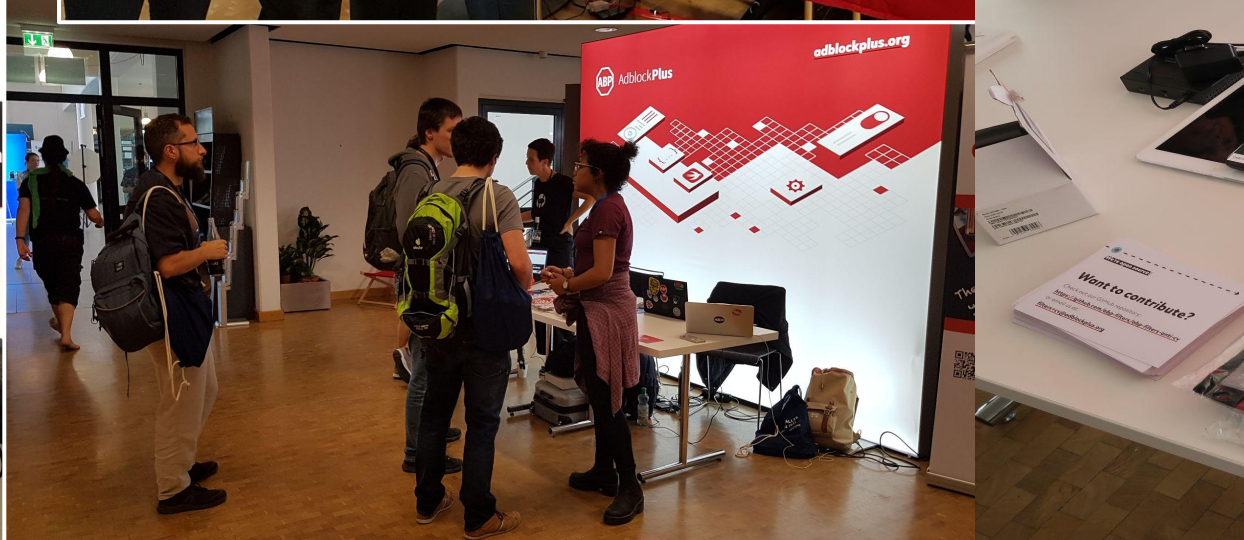The project has funding to continue operations

Economic Sustainability

The project has funding to continue operations for years to come.

Communicating securely with Mailvelope

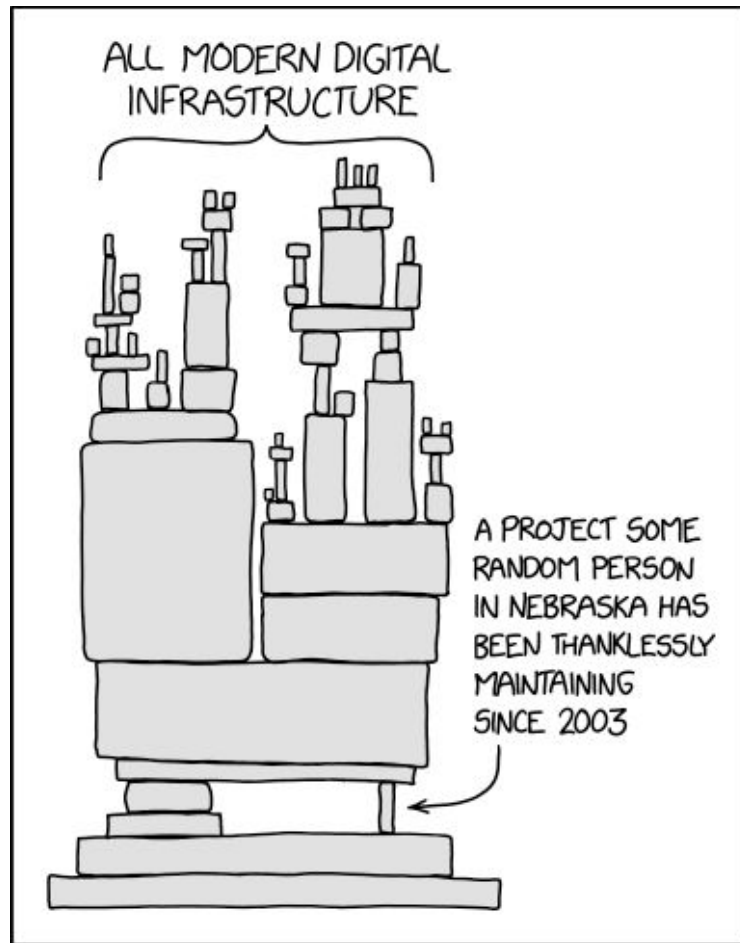Your sensitive data is securely protected by us.

No unauthorized person can read your data on the way – not even your provider.

And best of all, it's so simple that anyone can join in.

OpenSSL

Credit: Leena Snidate / Codenomicon, CC0, via Wikimedia Commons

"So the mystery is not that a few overworked volunteers missed this bug; the mystery is why it hasn't happened more often."

– Steve Marquess, OpenSSL

GnuPG

The World's Email Encryption Software Relies on One Guy, Who is Going Broke

Werner Koch's code powers the email encryption programs around the world. If only somebody would pay him for the work.
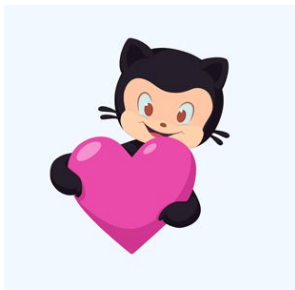
by Julia Angwin, Feb. 5, 2015, 11:24 a.m. EST

Reactions

Log4J

Your next task is to figure out which applications in your org use log4j

xz Utils
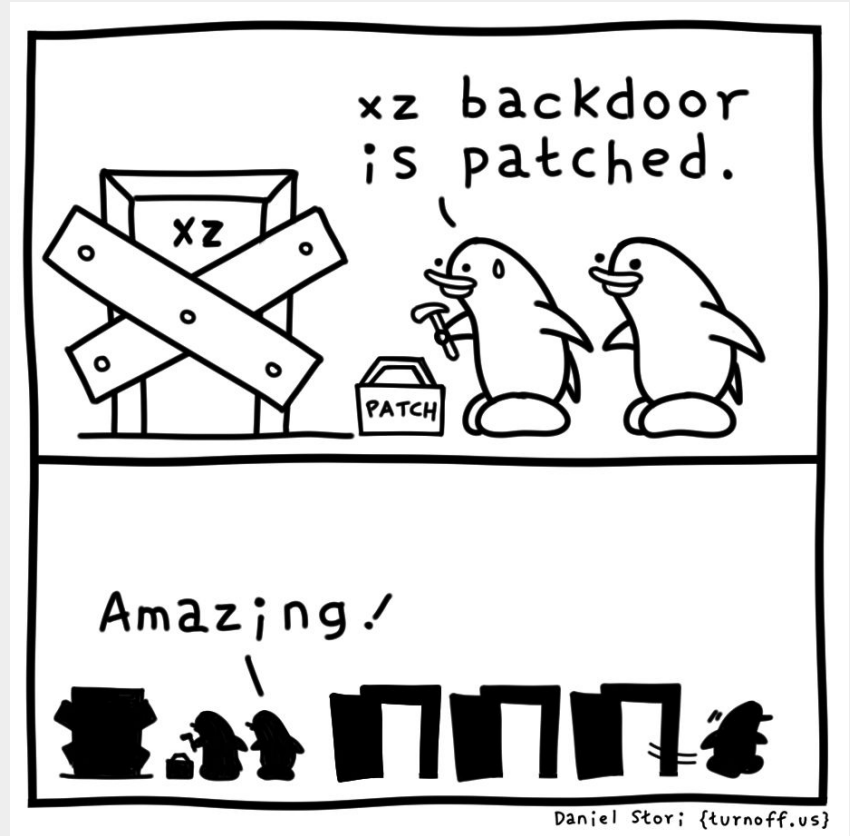
The situation today

- 96% of the surveyed codebases included OSS

- 77% of the code in the codebases was OSS

- 49% of code bases included OSS that had had **no developer activity in the past two years**

  — Synopsys '24 Open Source Security Report (audited > 1,700 codebases across 17 industries, source)

- 60% of open source maintainers describe themselves as "unpaid hobbyists."

- 44% of all maintainers said they are **the only person maintaining a project.**

  — Tidelift study 2023, https://thenewstack.io/open-source-needs-maintainers-but-how-can-they-get-paid

How to make a living from building Open Source software?

The Economics of Open Source

Voluntary, unpaid work

Voluntary, unpaid work
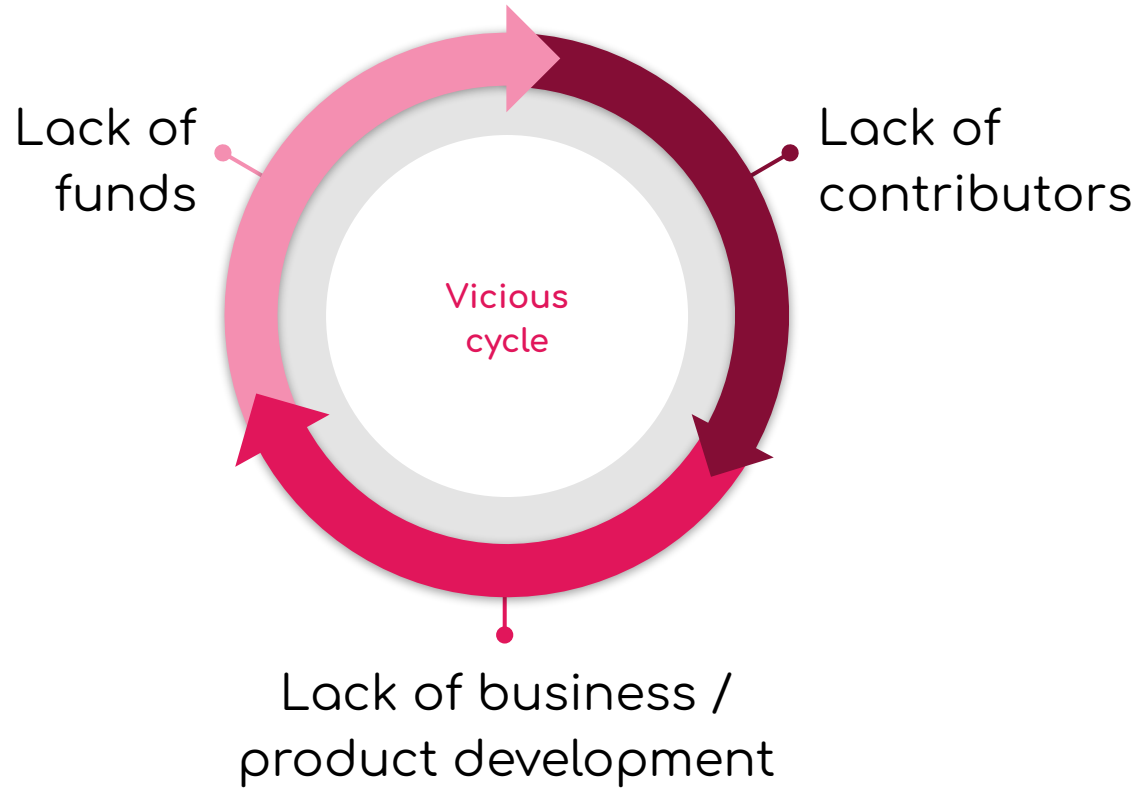

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Lack of funds

Lack of contributors

Vicious cycle

Lack of business / product development

Sustaining F/OSS: Business and Funding Models

Increases with success

Unrelated to success

Unpredictable

Predictable

Donations

Crowdfunding

GitHub Sponsors

Paid services

Ads

Dual licensing / paid product

Grants

Awards

Investment / VC

Paid internship

Paid contributor

Crowdinvesting

Universal Basic Income
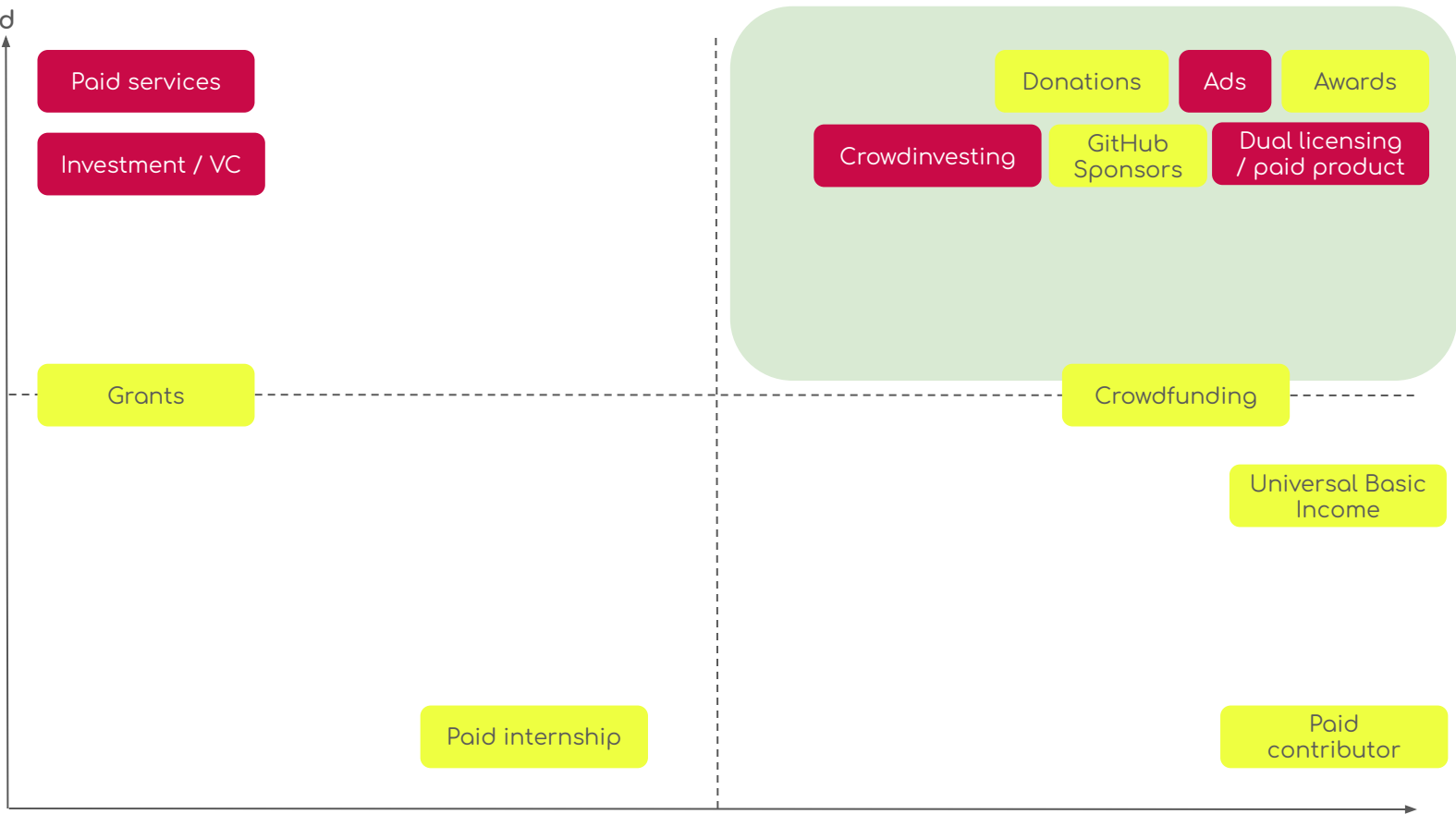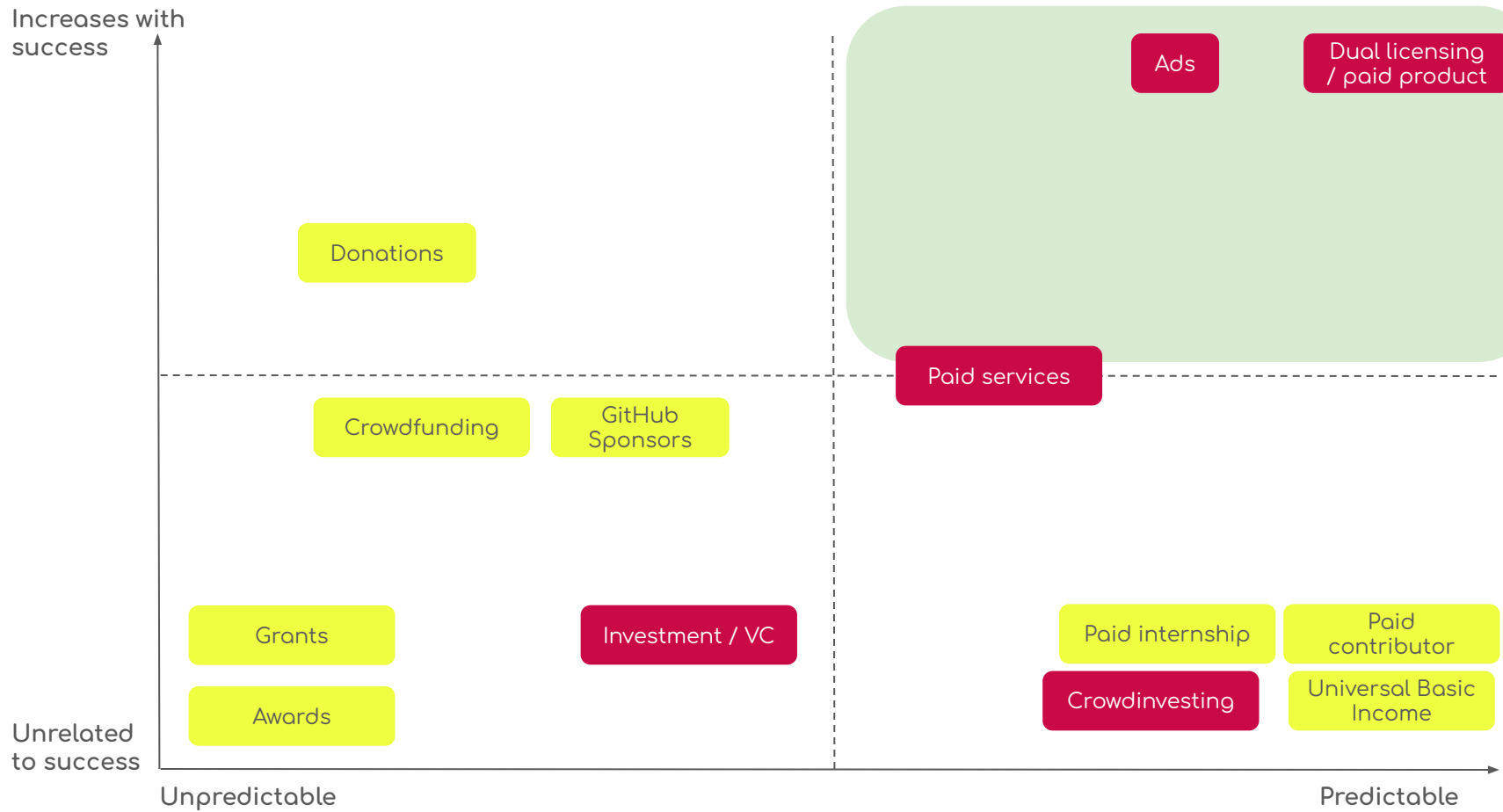
Examples

Adblock Plus

What is it?	Browser extension
What does it do?	Block ads, tracking, malware
License:	GPL
Developed by	Adblock Inc (subsidiary of eyeo GmbH)
Available since	2006

Funded by

- Ads / paid services: Acceptable Ads revenue

- Freemium

- Donations

Drupal

What is it?	CMS / DXP
What does it do?	Framework for web content publishing
License:	GPL
Developed by	Community
Available since	2001

Funded by

- Donations
- Grants (Drupal association)
- Sponsorships
- Paid contributors
- Paid services

GnuPG

What is it?   Crypto engine implementing PGP standard
What does it do?   Encrypt & signs data and communications; key management system
License: GPL
Developed by: Werner Koch / g10 Code GmbH

Available since   1997

Funded by

- Public contract (Germany, for GPG4Win and VS-Desktop)
- Crowdfunding
- Donations (by larger companies like Stripe, Facebook)
- Paid services (g10 Code GmbH)

Mailvelope

What is it?	Browser extension
What does it do?	Encrypt webmail communications
License:	AGPL
Developed by	Thomas Oberndörfer, Mailvelope GmbH
Available since	2012

Funded by

- Grants

- Paid subscriptions (Mailvelope Business)

Mozilla Firefox

What is it?   Browser
What does it do?   Accesses and renders web content
License: Mozilla Public License (MPL)
Developed by   Mozilla Foundation & Mozilla Corporation

Available since   2004

Funded by

- Donations (Mozilla Foundation)

- Paid services / Ads (Mozilla Corporation, 81% (2022) of income from Google paying for being the default search engine)

MySQL

What is it?	Database Management System
What does it do?	Stores and manages information in databases
License:	GPL and proprietary
Developed by	MySQL AB
Available since	1995

Funded by

- Paid product via dual licensing

Learnings

Longevity built on

- keeping the organization small

- finding a profitable paid services business model

- building a profitable paid services ecosystem

- dual licensing

- securing (unrestricted) grants

- securing (large) donations

Economic Sustainability

The project has funding to continue operations for years to come.

Beware!

- Tip jars / Gig economy

- Restricted funds

- Short-term grants

- Grant writing overhead

- Donation taxation

Tomwsulcer, CC0, via Wikimedia Commons

How about...

funding Open Source maintainers with public money from (corporate) taxes?

applying licensing that requires you to pay money when you build commercial offerings on top of OSS?

Licensing

"I want everyone to be able to use my code only for non-commercial purposes."

- Commons Clause: https://commonsclause.com

- Sustainable License: https://manishrjain.com/sustainable-license-faq

- Heather Meeker: https://heathermeeker.com/about-me/

What Open Source sustainability means for US

< 10%

female contributors to
Open Source repositories

Sources: https://www.toptal.com/open-source/is-open-source-open-to-women,
https://community.sap.com/t5/open-source-blogs/women-in-open-source/ba-p/13508760,
https://www.computer.org/csdl/magazine/co/2022/12/09963732/1Iz0RZM9Wbm

18%

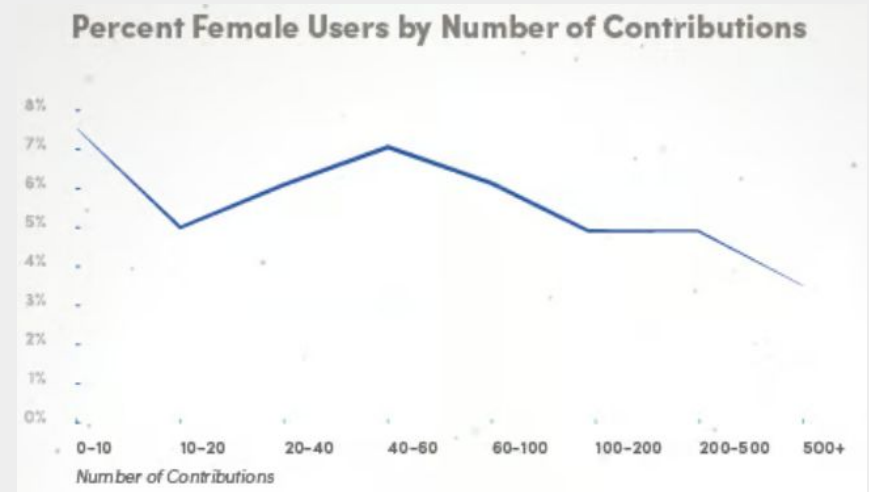Gender pay gap: In Germany, women earn 18% less than men.

(2022, DESTATIS)

9h

Gender care gap: Per week, women work 9h more unpaid than men do.

(2022, DESTATIS, Germany)

How can one expect women to contribute to Open Source when that means spending spare time we don't have, on another topic we are not going to be paid for?

Percent Female Users by Number of Contributions

Open Source sustainability enables diversity.

Thank you!

Jutta Horstmann

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@smphr (Mastodon)

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Mailvelope GmbH

https://www.mailvelope.com

@mailvelope (X, Mastodon)

https://www.linkedin.com/company/mailvelope/